



COURSE HANDOUT
FIRST/SECOND SEMESTER

In addition to part I (General Handout for all courses appended to the Time table) this portion gives further specific details regarding the course.

Course No : **BITS G540**
Course Title : **Research Practice**
Instructor-in-Charge : **Associate Dean, AGSRD**
Instructor(s) : **Supervisor(s)/Mentor(s)**

1. Aims and Objectives

This course is designed to train the students towards acquiring competence in research methodologies. The course will be conducted in terms of actual participation in Research and Development Work. Each student will be assigned to a faculty member to work on specified projects. The student will be required to present a number of seminars in his research area in a structured manner

2. Scope of the Course

The course broadly covers following aspects:

- (i) Research proposal
- (ii) Development related activities
- (iii) Research related activities

The 25% weightage would be for the project proposal, which the student would be required to write, based on the skills acquired. For developmental activities, which carry 25% weightage, the supervisor would assign to the student working with him an appropriate developmental work, which can be related to Centers/ Laboratories/ Assistance in course development or in the R&D activities of the supervisor. The student would have the teaching/research skills by assisting the supervisor in teaching, evaluation and research activities of the supervisor. Under the research related activities, which carries 50% weightage, a broad topic of research will be assigned to the higher degree student by the Supervisor and the student would conduct literature search in the specified area, learn various research methodologies/techniques for data collection and data analysis, testing techniques/methods etc. and deliver seminars in his/her research area to the supervisor. The student should also write research reports that along with the seminar/viva would form part of evaluation component related to research related activities.

3. Operational Details

1. Within 2 weeks of registration, the student should prepare the work plan (research proposal) for his research project and also for the developmental activities in consultation with the supervisor.
2. Mid semester grading will be done by the supervisor based on the work done and progress made towards planned objectives by the student in the assigned research area. The student is required to submit mid semester report describing the work done and progress made by him. He should also deliver a seminar to highlight these activities. Supervisors will grade the student for mid semester on the basis of the mid semester report described above and the Seminar presented by the student.
3. The student should submit mid-semester report in the 9th week of the semester to the

[Type here]



BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, Pilani
Pilani Campus
AUGS/ AGSR Division

supervisor and this should be followed by seminar/presentation by the student. The supervisor in turn is required to send mid-semester grades of all the students working with him to Head of Department by the end of 9th week of the semester.

4. End semester report would provide details of work done by the student. End semester report should be submitted to the supervisor and should be followed by seminar/presentation. Every student would write a research proposal. This research proposal would form a part of the final (end semester) report. The research proposal carries 25% weightage and should be written in the proper format i.e. (i) Topic of Research (ii) Background and current status of research work in the area as evident from the literature search/review, (iii) scope of the proposed research work, (iv) methodology (v) work plan and time schedule (vi) references and bibliography. The references and bibliography should be written in standard format and should be cited within the text of the research proposal.

4. Evaluation Scheme

Component	Indicators	Weightage
1. Research Proposal	Format	05
	Contents and Presentation	20
2. Development related Activities	Report (5+10)	15
	Viva/presentation (5+5)	10
3. Research related activities	Reports (10 for mid and 20 for end semester)	30
	Seminar/presentation/viva (5 for Mid and 15 for end semester)	20
Total		100

The concerned supervisor will announce mid-semester grade to the student and should submit the mid-semester evaluation form to HoD by the end of 9th week of the semester.

5. Course Notices

Notices pertaining to this course will be displayed on Department/AGSRD Notice Board.

6. General

Part – 1 of the Handout should also be consulted.

Check List of Items for Final Report of Research practice

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 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?
11. Is "Turnitin Originality Report" and "Digital Receipt" of the turnitin report included at

[Type here]



BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, Pilani
Pilani Campus
AUGS/ AGSR Division

the end?

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:

Book: Taiz, L. and Zeiger, E., Plant Physiology, 5 th Ed., 2010, Sinauer Associate, Sunderland, USA. pp. 778.
Journal Paper: Jain, N., Bhargava, A., and Panwar, J. 2014. Enhanced photocatalytic degradation of methylene blue using biologically synthesized “protein-capped” ZnO nanoparticles. <i>Chemical Engineering Journal</i> , 243: 549-555.
Conference/ Symposium Paper published in proceeding/abstract book: Pradhan, S.K., Mangesh N.S., Panwar, J. and Gupta, S. 2018. Synthesis of cobalt oxide nanoparticles for the removal of Cu(II) from aqueous solution. In: <i>23rd International Congress of Chemical and Process Engineering</i> (CHISA 2018), August 25-29, 2018, Prague, Czech Republic.
Ph.D. thesis or Dissertation: Bhargava, A. Mycosynthesis of inorganic nanoparticles and their evaluation in catalysis and nano-fertilization, Ph.D. Thesis, BITS Pilani, Pilani Campus, India, August, 2016.

[Type here]



CALENDAR OF EVENTS

I Sem.	II Sem.	Item	From	To
AUG 28	JAN 29	Detailed outline of work	Student	Supervisor
SEP 05	FEB 10	Viva –I	Student	Supervisor
OCT 08	MAR 15	Mid. Semester presentation and written report (Include “Turnitin Originality Report” at the end).	Student	Supervisor
OCT 08	MAR 15	Mid. Semester Grade	Supervisor	HoD
NOV 15	APR 15	Viva – II	Student	Supervisor
NOV 28	APR 30	Final presentation	Student	Supervisor
Dec 1 - 8	May 3-8	Final Viva	Student	Department
Dec 1 - 8	May 3-8	Final Report in soft and hard copy (Include “Turnitin Originality Report” at the end)	Supervisor	Head of Department

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 RESEARCH PRACTICE 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 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 as per the Calendar of Events above. Students should invariably submit final report on or before the above mentioned dates
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.



BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, Pilani
Pilani Campus
AUGS/ AGSR Division

Particulars of Research Practice

The student should correctly fill in this preform and submit it to Head of Department within two weeks of registration along with a copy of the work plan duly approved by supervisor

Name of the Student_____

ID No._____Discipline_____

Topic of Research Practice: _____

E-mail ID: 1. BITS email ID_____

2. Non-BITS email ID_____

Phone Number: _____

Contact details of the Supervisor:

Name _____ E-

mail id:_____Phone Number:_____

Research area (consult Bulletin)

Date : -----

(Signature of Student)

.

(Signature of Supervisor)



BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, Pilani
Pilani Campus
AUGS/ AGSR Division

Format of the Cover/Title page of report:

(Title)

Submitted in partial fulfillment of the
requirements of BITS G540 Research Practice

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 report entitled, _____

_____ and
submitted by _____ ID No. _____ in partial fulfillment of the
requirement of BITS G540 Research Practice embodies the work done by him/her
under my supervision.

Date:

Signature of the Supervisor

Name

Designation



BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, Pilani
Pilani Campus
AUGS/ AGSR Division

FIRST/SECOND SEMESTER 20 -20
BITS G540: RESEARCH PRACTICE
MID SEMESTER EVALUATION FORM

ID No. _____ Name of Student _____

Name of Supervisor _____

Evaluation:

S.No.	Evaluation component	Activity	Max marks	Marks awarded
1.	Research proposal	Contents	10	
		Presentation	15	
2.	Development related	Report	5	
		Presentation	5	
3.	Research related	Report	10	
		Presentation	5	
Total			50	

Mid. Semester Grade Recommended (A/A-/B/B-/C/C-/D/E):

"Turnitin Originality Report" and "Digital Receipt" of the turnitin report included
: Yes/No Reports, if any (NC/I, See Academic Regulation 4.12) (Give reasons)

Date: _-----

(Signature of Supervisor)

NB: Student should fill his particular in this copy and submit it to the supervisor for evaluation

* Possible break up of marks for grades:

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



BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, Pilani
Pilani Campus
AUGS/ AGSR Division

FIRST/SECOND SEMESTER 20 -20
BITS G540: RESEARCH PRACTICE
END SEMESTER EVALUATION FORM

ID No. _____ Name of Student _____

Name of Supervisor _____

Evaluation:

S.No.	Evaluation component	Activity	Mid Semester		End Semester		Total Marks
			Max marks	Marks awarded	Max marks	Marks awarded	
1.	Research proposal	Contents	10		-	-	
		Presentation	15		-	-	
2.	Development related	Report	5		10		
		Presentation	5		5		
3.	Research related	Report	10		20		
		Presentation	5		15		
Total			50		50		

Mid Semester Grade Recommended (A/A-/B/B-/C/C-/D/E):

"Turnitin Originality Report" and "Digital Receipt" of the turnitin report included

: Yes/No Total marks out of 100 (i.e. Total of mid and end semester marks -----

-

End Semester Grade Recommended (A/A-/B/B-/C/C-/D/E):

Reports, if any (NC/I)

(Give reasons)

Date: -----

(Signature of Supervisor)

NB: Student should fill his particulars in this copy and submit it to the supervisor for evaluation.

* 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