

2006

ORDINANCE

DOCTOR OF PHILOSOPHY

FOREST RESEARCH INSTITUTE
(DEEMED UNIVERSITY)
DEHRA DUN

ORDINANCE GOVERNING THE PH.D.

1. INTRODUCTION

1.1 These ordinances shall be called the Doctor of Philosophy (Ph.D.) Ordinance and shall come into force from the date of Academic Council approves them.

1.2 The degree of Doctor of Philosophy (Ph.D.) Forest Research Institute Deemed University shall be awarded to those fulfilling the conditions as laid down in the ordinance.

1.3 DEFINITIONS

In these Ordinance unless the context otherwise requires:

- i) Academic Council means, Academic Council of F.R.I. Deemed University
- ii) CSIR means, Council of Scientific & Industrial Research
- iii) Director means, Director of Forest Research Institute Deemed University
- iv) F.R.I. means, Forest Research Institute, Dehra Dun.
- v) Head of Division means, Heads of Research Divisions of F.R.I Deemed University/ Research Centers.
- vi) Institute means, F.R.I. Deemed University
- vii) ICAR means, Indian Council of Agriculture Research.
- viii) ICFRE means, Indian Council of Forestry Research & Education.
- ix) Nodal officer means, Nodal Officer of Research Center of F.R.I. Deemed University.
- x) Research Center means, Research Center created by F.R.I. Deemed University
- xi) R.A.C. means, Research Advisory Committee.
- xii) R.D.C. means, Research Degree Committee.
- xiii) Registrar means, Registrar, Forest Research Institute Deemed University
- xiv) UGC means, University Grants Commission.
- xv) External Research Scholar means, Research Scholar who pursues research as in service candidate and employed permanently in a graded pay scale in a government organization/statutory autonomous body. The external research scholar is required to submit a 'no objection certificate' from his/her employer to pursue research in the institute (FRI Deemed University).
- xvi) Internal Research Scholar means, Research Scholar who pursues research as a regular candidate.

2. RESEARCH COMMITTEES

2.1 Subject to the general supervision of the Academic Council, all matters connected with the Doctoral programme of a Ph.D. Scholar shall be dealt with in accordance with these ordinance by the following committees:

- i) The Research Degree Committee (RDC)
 - i ii) The Research Advisory Committee (RAC)
- 2.2 The **RDC** shall consist of the following:-
- a) Director or his nominee (Chairman)
 - ii) Four experts nominated by the Director for two years
 - iii) Heads of the concerned Divisions
 - iv) Supervisor and Co-supervisor, if any, of the Ph.D. Scholar
 - v) The Registrar (Member Secretary)

2.3 The **RDC** shall:

- a) Consider the recommendations of the RAC with regard to appointment or change of supervisor/co-supervisor.
- b) Consider the report of the examiners and take the decision for the award of degree.
- c) Consider the report of RAC regarding extension of the term of registration of a Ph.D. Scholar beyond five years.

2.4 The standing **RAC** for the Ph.D. Scholars in each discipline **shall be constituted by the Director**, FRI/Research Centers concerned.

The **RAC** shall consist of the following:-

- (a) Chairman
- (b) Two experts from outside the division/institute.
- (c) One expert from the division
- (d) One Statistician/Research Methodology Expert
- (e) Supervisor and Co-supervisor-Ex-officio Member
- (f) Member Secretary – **Head of Division**(in case of FRI)/
Nodal Officer or his nominee(in case of research center.)

The standing RAC shall be constituted for two years. The member secretary may convene the meeting of RAC in consultation with the chairman and the other members as and when necessary.

(amended vide resolution No. 4 of the academic council meeting held on 11.11.2005)

2.5 The **RAC** shall:

- a) Examine the synopsis received from the applicant for enrollment as Ph.D. Research Scholar and shall hold a synopsis seminar in which all the Forest Officers/Scientists/RAC/Research Scholars of the concerned Division/Research Center shall participate. The suggestions made in the seminar may be incorporated in the synopsis already submitted by the candidate. The RAC after holding the synopsis seminar shall recommend appropriate topic for registration and approve the synopsis after

necessary revision/correction/modification as per the Ph.D. Ordinance. The recommendation of RAC should come in the Performa as given in Appendix-4;

- b) Recommend co-supervisor, if necessary;
- c) Recommend, if necessary, in consultation with the Supervisor/Co-Supervisor for constitution of an Advisory Committee consisting of the Scientist/Teacher/Forester concerning the field of research of the Research Scholar. The Advisory Committee shall help/guide the Research Scholar in his/her research work in consultation with and overall supervision of the Supervisor;
- d) Examine the application of the Research Scholar for extension of his/her term of registration beyond five years and recommend to the RDC for extension of his/her term of registration for maximum of one year;
- e) Recommend short-term basic course in **Silviculture/Forestry/Forest Management/Mensuration/Forest Ecology** subjects for those who have no knowledge of these subjects;
- f) To hold pre-thesis submission seminar of a Research Scholar who has completed his/her research work and recommend a panel of eight examiners **giving brief bio-data and indicating major areas of research/expertise of the examiners.**

While making their recommendations the RAC shall see that the recommendations are made in conformity with the ordinance and such other directives as may be issued from time to time by the Academic Council in regard to matters connected with Ph.D. research.

2 (A) **ADMINISTRATIVE COMMITTEE**

There shall be a Counseling sub Committee for the purpose of counseling the research scholars and the concerned supervisors including the resolution of grievances if any.

(constituted vide decision taken by the academic council at its meeting held on 11.11.2005)

2.(A).1 The **Counseling sub Committee** shall consist of the following :-

- | | | | |
|----|--|---|-----------------|
| 1. | Dean(Academic), FRI Deemed University | : | Chairman |
| 2. | Any two Head of Divisions of FRI/other research center
(to be nominated by the Director, FRI
Chairman Academic council) | : | Member |
| 3. | Registrar, FRI Deemed University | : | Member |
- Secretary**

All the cases involving academic/research interests of the research scholar and the supervisor should be addressed to the Director, FRI.

2(A).2 **The terms of the reference of the Sub Committee shall be as follows:-**

- a) The committee shall look into all the matters that may be referred to it by Chairman, Academic Council.
- b) The Chairman, Academic Council may direct office of the Registrar, FRI (Deemed University) to examine the cases related to academic/research interests of the research scholar and the supervisor and may issue suitable instructions. In exceptional cases which may require detailed analysis, the Director/Chairman Academic Council may refer such cases to the Counseling Sub Committee for its opinion.
- c) The Sub Committee may study the specific cases and devise its own procedure to analyze the issue referred to it and may submit its recommendation to the Director. The Director, FRI/Chairman Academic Council may pass appropriate order on the recommendation of the Counseling Sub Committee.
- d) The Chairman of the Sub Committee may convene the meeting of the Sub Committee as and when necessary.

3. ADMISSION REQUIREMENT

- 3.1. To be eligible for admission to the Doctoral programme, a candidate must:
 - (a) Hold a master's degree or its equivalent from any recognized university/institute in a subject approved by F.R.I. (Deemed University).
 - (b) Have received grades 55% or above in Post graduate examination.
- 3.2 In case of registration of foreign students as Ph.D. Scholars the Equivalence Committee of the F.R.I. Deemed University before their registration shall settle the equivalence of the degree possessed by them.
- 3.3. A candidate who meets the requirements mentioned above may select a field of study out of the following:

Sl. No.	Discipline (Subject of study)	Qualification for admission in doctoral programme
1.	Silviculture	Post-graduate degree in Forestry, Agriculture or Botany
2.	Forest Seed Tech.	Post-graduate degree in Forestry, Agriculture or Botany
3.	Forest Genetics	Post-graduate degree in Botany, Agriculture or Forestry with specialization in Genetics
4.	Forest Botany	Post-graduate degree in Botany with specialization in Systematic Botany or Plant Physiology or Wood Anatomy Post-graduate degree in Agriculture with specialization in Plant Physiology
5.	Forest Pathology	Post-graduate degree in Botany, Forestry, Wood Science & Technology or Agriculture with specialization in Plant Pathology/Microbiology.
6.	Forest Entomology	Post-graduate degree in Forestry, Zoology with specialization in Entomology or Agriculture with specialization in Entomology

7.	Soil Science	Post-graduate degree in Chemistry, Microbiology Geology, Soil Science or Agriculture (with specialization in Agricultural Chemistry, Soil Science)
8.	Forest Ecology & Environment	Post-graduate degree in Biological/Life Science/ <u>Wildlife Science</u> , Environment Management/Science or Forestry or <u>Chemistry</u> or M. Tech Environment Engineering
9.	Forest Management	Post-graduate degree in Mathematics, Statistics, Computer Application, Agriculture Forestry, Forestry
10.	Wood Science & Tech.	Post graduate degree in Physics, Chemistry, Engineering or <u>Botany with specialization in Wood Anatomy or Post Graduate Degree in Wood Science & Technology.</u>
11.	Chemistry of Forest Products	Post-graduate degree in Organic Chemistry, Bio-Chemistry or Agricultural Chemistry, <u>MD in Pharmacology or equivalent in Indian System of Medicine, Post Graduate degree in Pharmacology, Industrial Chemistry</u>
12.	Pulp & Paper Technology	Post-graduate degree in <u>Chemistry</u> , Chemical Engineering or Paper Technology
13.	Forestry Extension	Post-graduate degree in Agriculture Extension, Forestry
14.	Non Wood Forest Products (NWFP)	Post Graduate degree in Botany/Forestry, Organic Chemistry, Agriculture with specialization in cultivation of medicinal plants, MD in Pharmacology or equivalent in Indian System of Medicine
15.	Forest Biotechnology	Post Graduate degree in Biotechnology, Post graduate degree in life sciences with specialization in Biotechnology/ Post Graduate degree in Biochemistry/Molecular biology/ Microbiology
16.	Forest Bio informatics	Post Graduate degree in Bio informatics or Post graduate degree in Forestry/Botany with minimum one year PG Diploma in Bio informatics from a recognized institution
17.	Environment Management	Post Graduate degree in Environment Management, Environmental Science, M.Tech Environmental Engineering or Post Graduate degree in Chemistry with specialization in Environmental Chemistry.

(Amended vide resolution no. 2 of Academic Council meeting held on 11.11.2005)

4. PROCEDURE FOR ADMISSION

- 4.1 A candidate may be admitted as an internal Ph.D. Scholar or external Ph.D. Scholars as defined in under noted Para of 1.3
- 4.2 There shall be two terms of six months each in a year for Ph.D. Scholars Viz. 1st September to end of February; 1st March to end of August.
- 4.3 Candidates for the degree of Doctor of Philosophy in Forestry may be registered at the beginning of any term i.e. either from 1st September or from 1st March provided that the results of the qualifying examination is declared before the commencement of the term.
- 4.4 A candidate for the Ph.D. degree must apply for registration on the prescribed form as given in Appendix-I to the Registrar, FRI (DU).

4.5 The application shall be accompanied by:

- (a) Non-refundable application fee of Rs.500/- by Bank Draft in favour of Registrar, FRI, (Deemed University), Dehra Dun.
- (b) A certificate from the Head of the Division testifying that adequate research facilities exist and stating that the candidate is permitted to work in the Division/under the Supervision of person(s) mentioned in the application.
- (c) Synopsis of the proposed research and the method to be followed (5 copies)
- (d) A brief statement of the literature studied and exploration made in the area of the research (5 copies).
- (e) A statement of the work that the candidate may have done on the subject along with copies of publications (5 copies each)
- (f) Attested copies of the mark sheet/grade sheet of Master's Degree/Post Graduate Diploma.

4.6 The registration letter for the Ph.D. degree will be issued only after receipt of the following fees to the FRI (Deemed University).

Sl. No.	<u>Fees to be deposited at the time of registration</u>	Fee (in Rs.)
1.	Registration/Enrolment Fee	10000.00
2.*	Thesis Fee	10000.00
3.	Cultural/Sports/Magazine	1000.00
	Total	*21000.00
	+Fee at the beginning of each semester (6 months)/Year	
4.	Annual fee	5000.00
5.	Laboratory fee to be charged annually for four semesters (to be paid to respective research centers for each semester of six months)	1500.00 (per semester) i.e. Rs. 3000.00 per year
6.	Library fee per year (to be paid to respective research centers)	1000.00
	TOTAL Per year (for first two years)	*+ 9000.00
7.	Caution Money (Refundable)	*+ 2000.00
<u>Yearly fee for remaining period of registration</u>		
	Annual fee	5000.00
	Library fee per year (to be paid to respective research centers)	1000.00
	Laboratory fee to be charged annually for four semesters(i.e. for 2 years)only(to be paid to respective research centers for each semester)	1500.00 (per semester) i.e.Rs. 3000.00 per year
8.	Late fee	500.00
9.	Renewal of registration fee	1000.00

(*Thesis fee shall be deposited at the time of submission of the thesis as per the decision taken by the Board of Management at its meeting held on 18.11.2005)

Provided that the External Research Scholar shall be required to pay only the registration fee, thesis fee, Cultural/ magazine fee/sports fee and Annual fee in the FRI Deemed University. However, the external research scholars may be charged Library fee, Laboratory fee and Caution Money by the research centers, in case they avail these facilities in the research centers concerned.

4.7 A candidate shall ordinarily be permitted to work for Ph.D. Degree in the subject in whom he/she has obtained his/her Master's Degree and/or Post-graduate Diploma (recognized by FRI (Deemed University)/UGC equivalent to Master's Degree.)

4.8 A candidate shall pursue research at one of the Research Divisions concerned with his/her subject.

4.9 PROCEDURE FOR REGISTRATION OF FOREIGN CANDIDATES AS PH.D. RESEARCH SCHOLAR

Applications for foreign nationals nominated by the Government of India under scholarship scheme and self-financing foreign nationals will be entertained for registration as an internal Ph.D. Scholar subject to the condition that they should fulfill the following conditions:

- (a) Must hold a master's degree and secured at least 55% marks.
- (b) The applications of scholarship holders (under various schemes) of foreign nationals for admission must be routed through Indian Council for Cultural Relations/Ministry of Human Resource Development (Dept. of Education), Govt. of India, New Delhi or Ministry of Environment and Forests, Govt. of India, New Delhi.
- (c) The foreign students under self-financing scheme should send their application directly to the Institute.
- (d) They must have valid students Visa at least for a period of two years.
- (e) The candidate must have a certificate to be verified by the Ministry/Agencies to the effect that the candidates had been subjected to AIDS test and found negative.
- (f) They should have adequate knowledge of English.
- (g) The Degree/Certificate of the candidates must have been approved by the Association of Indian Universities (A.I.U) or equivalent to the corresponding degrees/certificate of Indian Universities.
- (h) They are required to pay the following fees in U.S. dollar:
 - i. Application fee US \$ 25
 - ii. Registration Fee US \$ 50
 - iii. Lab and other Fee US \$ 750 p.a
 - iv. Caution money US \$ 100
 - v. Culture, Magazine & Sports US \$ 25
 - vi. Hostel Fee US \$ 50 p.m.

5. SUPERVISOR/CO-SUPERVISOR

The person working in F.R.I (Deemed University) or its Research Centers recommended for appointment as Supervisor or Co-supervisor to guide research must be:

- i) A forester/scientist/teacher who possesses a degree of the Doctorate and published work of high standard of Research.

Or

- ii) Director, Professor, Reader/Scientist-E of the Institute or its Research Centers who possesses experience of conducting and/or guiding research for at least 5 years and has outstanding research work to his/her credit.

Provided that an eminent Scientist not below the rank of Reader or retired as Reader/Scientist-D other than F.R.I. or its research centers may be appointed as Co-supervisor of a Research Scholar subject to the condition that in such case the research scholar concerned is required to pursue his/her research work mainly in F.R.I. (Deemed University) or its research centers.

That no research scholar hereinafter should be registered under a Scientist/forester who is going to retire or whose tenure of deputation is going to expire within 2 years from the date of registration.

- 5.2 Ordinarily there shall not be more than six Research Scholars at a time under a Supervisor/Co-Supervisor. Provided that the Director may permit not more than two Research Scholars working under a scheme/fellowship awarded by an agency such as UGC, ICAR, CSIR, ICFRE or FRI (Deemed University), to be registered under a Supervisor or a Co-supervisor who has already got six Research Scholars working under him/her.

That the name of research scholars who have already completed 3 years of their term of registration should not be counted for the purpose of fixing the quota of research scholars under a Supervisor.

- 5.3 Persons who have registered themselves, as Ph.D. Scholars shall not act as Supervisor or Co-supervisor of any Ph.D. Scholar.
- 5.4 The change of Supervisor should be discouraged. However, in exceptional circumstances, the Director, may change the Supervisor on the recommendation of the R.D.C. No change of Supervisor shall, however, be necessary in case of absence of the Supervisor for less than a year provided the candidate has worked under him/her for a year or more. In such cases the R.D.C. shall only assign an acting Supervisor during the Supervisor's absence.

5.5 Whenever, changes in the Supervisor become necessary the period of research to be subsequently put in by the Ph.D. Scholar may be extended by such duration as may be decided by the RDC in each individual case.

6. ENROLLMENT

6.1 Each RAC shall send a copy of the minutes of Synopsis seminar along-with the application of the candidate to the Registrar who shall issue letter of admission to the candidate recommended by the RAC after proper scrutiny and approval of the Director.

6.2 On receipt of the communication regarding the admission, the candidate shall pay the requisite fees to the Registrar latest by 30th September or 31st March for enrollment in that particular term.

6.3 *Internal Ph.D. Scholars shall be required to be present in the Institute for prescribed terms as mentioned in the Para 6.8. Their presence shall be duly recorded and maintained in the Division concerned.

***Approved by Board of Management vide its resolution no. 1 dated 12th June 2000.**

6.4 A record of the progress of every Ph.D. Scholar shall be kept by his/her Supervisor. The Supervisor shall forward six monthly progress reports of the candidate in March and September to the Chairman, RAC. The RAC shall consider the progress reports and forward the same with recommendations and comments, if any, to the Registrar.

6.5 **Registration of a Ph.D. Scholar is liable to be cancelled by the Director at any time if:-**

i) Two consecutive six monthly progress reports are not submitted at all or are not satisfactory as per recommendations/comments of RAC.

ii) The attendance in case of internal Research Scholar should not be less than 75% in any term.

6.6 No internal Ph.D. Scholar shall accept during the period of research any paid assignment apart from Research Fellowships, Research Assistantship etc. unless in the opinion of the RAC such an assignment will not interfere with his/her research work.

6.7 A Ph.D. Scholar shall not be permitted to take any other degree course, but may be permitted by the RAC to take part-time Diploma or Certificate course(s) not affecting the scholars research work adversely.

- 6.8 An internal Research Scholar as mentioned in clause 6.3 is required to pursue research in the Institute/Research Center under the Supervisor on the approved subject for not less than twenty-four months commencing from the date of his registration.
- 6.9 The Research Scholar may not later than eight months from the date of registration, modify the scheme of the research work or nature or scope of the subject, on the recommendation of the Supervisor and RAC with the approval of Director.
- 6.10 A Ph.D. Scholar shall be permitted to submit his thesis not earlier than twenty-four months from the date of his registration.
- 6.11 In case a Research Scholar does not submit his/her thesis within five calendar years from the date of permission granted to him/her unless the term is extended by the Research Degree Committee on the recommendation of the Research Advisory Committee for a period of 1 calendar year, his/her registration shall lapse.

Provided that Research Degree Committee on the specific recommendation of Research Advisory Committee concerned may extend the term of registration of a research scholar for one more year as a very special case.

The recommendations of the R.A.Cs for extension of term of registration must reach this office before expiry of the term of registration.

- 6.12 It shall be made **compulsory for all the internal Ph.D. Scholars** to pursue the following courses for **100 Hours each** at F.R.I (Deemed University) or its Research Centers. However, pursuance of these courses by an external research Scholar shall be optional unless specifically recommended by the R.A.C concerned:-
- i) Computer application course as per syllabus vide Appendix - 1
 - ii) Statistical analysis course as per syllabus vide Appendix – 2
 - iii) **Short-term basic course in Silviculture/Forestry/Forest Management/ Mensuration/Forest Ecology subjects for those scholars who may be deficient in knowledge of these subjects in the opinion of the RAC. In such cases the RAC concerned may recommend all or any of the subjects to be pursued and passed by the scholars before the award of Ph.D. Degree. (Amended vide resolution no. 2 of the academic council meeting held on 11.11.2005)**

In all such cases, where research scholar may have pursued these courses as given in item no. (i) & (ii) above as a part of curriculum in any other course, the research scholar concerned shall be allowed to appear in the exam directly and be exempted to

appear in the regular classes. The scholar will have to pass the exam as per the rules of the FRI (Deemed University) and a certificate to that effect will have to be issued by the research center concerned and submit to the office of the Registrar, FRI (Deemed University) at the time of submission of the thesis (**Amended vide resolution of the academic council meeting held on 3-3-2004**).

6.13 The performance of the Research Scholar concerned shall be evaluated at the end by the RAC concerned during Pre-thesis Submission Seminar and report may be sent to Registrar for record.

7. SUPPLICATION

7.1 On completion of the research work for Ph.D. by the candidate, the Supervisor shall organize, in consultation with the Head of Division under the auspices of the RAC a pre-thesis submission seminar by the candidate to present his/her progress and achievements and to receive suggestions for further improvement of the thesis.

7.2 After the seminar, the Supervisor shall forward the application of the candidate for supplication of the thesis along-with a certificate about completion of the Seminar and the exact title of the thesis duly approved by the R.A.C.

7.3 A Ph.D. Scholar shall ordinarily supplicate his Ph.D. thesis within six months from the date of his/her pre-thesis seminar through the Supervisor and the Head of Division. The supervisor shall forward therewith **four hardbound printed copies of the Ph.D. Thesis** to the Registrar. (**Amended vide resolution no. 3 of the academic council meeting held on 11.11.2005**)

7.4 The **thesis shall comply with the following conditions and should contain following documents:**

i) It must be a piece of research work characterized either by the discovery of facts or by a fresh approach towards the interpretation of facts. In either case, it should evince the candidate's capacity for critical examination and sound judgment.

ii) It shall be satisfactory in point of language and presentation of subject matter.

iii) The thesis in hard bound form shall be accompanied by:-

- 1) A declaration from the Ph.D. scholar that the thesis embodies the result of his/her own work and observations and in that respects the investigation appears to advance knowledge in the subject.
- 2) A certificate from the Supervisor stating:
 - a) That thesis embodies the work of the Ph.D. Scholar himself/herself
 - b) That in the opinion of the Supervisor/(Co-supervisor, if any), the thesis fulfills the requirements of the Ordinance governing award of Ph.D. Degree of F.R.I., (Deemed University).

- 3) A certificate from RAC to be obtained at the time of pre thesis seminar in the given format at **Appendix -3**.
- 4) Registration letter.

The documents specified above shall be bound in the beginning of the thesis strictly in the above sequence.

(Amended vide resolution no. 3 of the academic council meeting held on 11.11.2005)

7.5. Format of the thesis

(Added vide resolution no.3 of the academic council meeting held on 11.11.2005)

The entire thesis submitted to the FRI Deemed University shall be in following format.

- (i) The thesis cover page should be printed in the under mentioned format:

Title of the thesis

THESIS
SUBMITTED TO THE
FOREST RESEARCH INSTITUTE
DEEMED UNIVERSITY
DEHRA DUN, UTTARANCHAL
For
THE AWARD OF THE DEGREE OF
DOCTOR OF PHILOSOPHY IN FORESTRY
(Name of Discipline should be printed here)



By
Name of the Research Scholar
Name of the Division/Research Center
Year

- (ii). The following should be printed on the side of the thesis:
Name of the scholar
Title of the thesis
Year of submission of the thesis
- (iii). The cover should be either green or black in colour. The colour of the letters printed on the cover should be golden and the thesis cover should be laminated.

8. EXAMINATION

8.1 When the Ph.D. Scholar has completed his/her pre-thesis seminar, the concerned RAC shall recommend to the Registrar **a panel of at least eight examiners giving brief bio-data and indicating major areas of research/expertise of the examiners.** The scholar shall submit four copies of an abstract of about 600 words of the thesis work along with the thesis. The panel of examiners shall be submitted by the Registrar to the Director, FRI Deemed University for appointment of **three examiners.** However, the Director, FRI Deemed University may appoint any other expert as examiner beyond the names recommended by the RAC. After appointment of the examiners by the Director FRI, the Registrar shall get in touch with each examiner with a copy of the abstract to secure acceptance of the examiner ship.

(amended vide decision of the meeting of Academic Council held on 3.3.2004 and 11.11.2005)

8.2 An examiner shall ordinarily be required to accept the appointment offered by the F.R.I. (Deemed University) within the time indicated by the Registrar in the appointment letter. If, however, no information is received from an examiner within a reasonable time from the date of issue of the letter of appointment his appointment shall stand cancelled and another examiner shall be appointed.

8.3 On receipt of the acceptance of any examiner, the Registrar shall forward the copy of the thesis to him and take all action to get the report of the examiner expeditiously.

8.4 The examiner shall be requested to submit their individual reports within two months on the receipt of the thesis.

8.5 The examiner shall categorically recommend in the prescribed Performa acceptance or rejection or revision of the thesis and also give their detailed comments and examiners shall state if the thesis complies with the following conditions in case they recommend the award of the degree.

- a) It is a piece of research work characterized either by discovery of facts or by a fresh approach towards interpretation of facts.
- b) The thesis evinces the Research Scholar's capacity for critical examination and sound judgment.
- c) It is satisfactorily in point of language and presentation of such matter.

8.6 The examiner shall return the copy of the thesis, soon after submission of the report.

- 8.7
- (a) In case all the three examiners accept the thesis the same shall be accepted.
 - (b) In case all the examiners reject the thesis **or** two of them reject the thesis and third accept the thesis **or** two of them rejecting and the third recommending revision such thesis shall be rejected.

(c) In case any of the examiners recommends for revision/rejection of the thesis for the second time, the thesis shall be rejected.
(Approved by the Academic Council vide resolution no. 4 dated 11.11.2005)

8.8 If two examiners accept the thesis and the third examiner recommends for revision **or** if all the three recommend for revision **or** two recommending for revision and the third one recommending rejection **or** one examiner accepting the thesis and two recommending revision, in all such conditions the thesis will be returned to the scholar for revision and the research scholar shall have to resubmit the thesis after revision in the light of examiner's observations. The revised thesis shall be sent to the examiners for evaluation once again.

(Approved by the Academic Council vide resolution no. 4 dated 11.11.2005)

8.9 If two examiners accept the thesis and the third reject the thesis **or** in case one accept the thesis, one recommends revision and the third reject the thesis in such case the Director, FRI shall appoint the fourth examiner for evaluation of the thesis. The opinion of the fourth examiner shall be final and binding on the scholar.

(Approved by the Academic Council vide resolution no. 4 dated 11.11.2005)

8.10 If the examiners recommend that the candidate be asked to revise his/her thesis the Director shall permit the candidate to resubmit his thesis not earlier than six months and not later than eighteen months, the period being counted from the date of order of the Director granting the permission. In case a candidate is allowed to resubmit his/her thesis he/she shall have to pay a fresh fee of Rs. 250/- at the time of resubmitting his/her thesis but it shall not be necessary for him/her to reproduce any certificate of further attendance at the Institution/Research Center at which he/she had carried on his/her work.

8.11 The re-submitted thesis shall be examined as far as possible by the old set of examiners.

8.12 As per the above sub clauses if the thesis is accepted then the research scholar shall be called upon to appear for a test before the following Viva-Voce Board:-

1. External examiner - Chairman.
(Nominated by the Director, FRI)
2. Internal examiner - Member
(Supervisor/Co-supervisor)

On satisfaction of the Viva-Voce Board the chairman may write a detailed report in his/her own hand in the prescribed Performa on the viva-voce presentation by the scholar and may recommend him/her for award of Ph.D. Degree by FRI (Deemed University). Such case shall be submitted to the RDC for consideration of the award of Ph.D. degree. The Board of Management shall award the final degree on passing of grace.

Provided that if a Viva-Voce board is not in a position to conduct the Viva-Voce examination, the Director may look into the special circumstances of the case and may appoint alternative Viva-Voce examiner/examiners.

- 8.13 In case the recommendations of the Viva-Voce examiners differ from that of the thesis examiners or there is a difference of opinion between the Viva-Voce examiners, the Research Scholar may be asked to re-appear at a second Viva-Voce examination within six months. If the Research Scholar fails to satisfy the Viva-Voce examiner a second time, his thesis shall be finally rejected.
- 8.14 The examiners may seek clarification on the subject matter of the thesis from the Supervisor. The provision will be incorporated in the letter to be sent to the examiners while sending the thesis.
- 8.15 The thesis as such shall be published only with the permission of the F.R.I. (Deemed University) and such publication, shall state on the title page itself that it was a thesis approved for the award of the Ph.D. Degree of the F.R.I. (Deemed University).

9. CONCLUSION

- 9.1 From the date when these Ordinance come into operation all previous Ordinance on the subject shall cease to have effect.

Provided that his revocation shall not affect the previous ordinance so revoked or anything done or suffered under any previous ordinance so revoked or affect any right, privilege, obligation or liability acquired, arrived or incurred under any ordinance so revoked.

- 9.2 Notwithstanding anything contained in these ordinances, any question, which is not covered by these ordinances, or any difficulty arising out of these ordinances shall be dealt with by the Academic Council.

Syllabus For Computer Application Course For Ph.D. Research Scholars

1. COMPUTER FUNDAMENTALS
 - a) Computer Basics
 - b) What is computer?
 - c) Why computers?
 - d) Types of computers
 - e) Classification of Digitals
 - f) Elaboration of Hardware, Software & Manware
 - g) Computer Terms into computer terminology

2. WORD PROCESSOR (MICROSOFT WORD-2000)
 - a) What is a word processor?
 - b) What is desktop Publishing?
 - c) Uses of word Processor
 - d) Understanding different menus submenu
 - e) Understanding hotkeys
 - f) Utilities of word processor for normal and desktop

3. OPERATING SYSTEM (MSDOS+WINDOWS 95/98)
 - a) Commands utilities
 - b) Difference between GUI & CUI
 - c) Internal & external Dos commands
 - d) Wildcards
 - e) Win 95 / 98 Desktop
 - f) Win 95 / 98 Menus
 - g) Windows as a view

4. ELECTRONIC SPREAD SHEET (MICROSOFT EXCEL-2000)
 - a) What is spread sheet?
 - b) Areas of Application
 - c) Construction formulas
 - d) Understanding menus and submenus
 - e) Designing graphs and charts
 - f) Understanding uses of spreadsheets and workbooks

5. PRESENTATION GRAPHS (MICROSOFT POWERPOINT-2000)
 - a) Understanding presentation graphics
 - b) Designing slides

- c) Designing slideshow
 - d) Understanding transitions
 - e) Understanding menus and submenus
 - f) Project
6. DATABASE (MICROSOFT ACCESS-2000)
- a) Understanding database
 - b) Understanding Data mining
 - c) Understanding menus and submenus
 - d) Constructing Quires
 - e) Constructing forms
 - f) Constructing tables
 - g) Constructing Reports
 - h) Data Management
 - i) Projects
7. PROGRAMMING LOGICS
- a) Programming Basics
 - b) Flow charting and data diagrams
 - c) Problem solving approach
 - d) Differentiating between structured and object oriented programming
 - e) Making Pseudopodia
 - f) Making Algorithms
 - g) Decision Making
 - h) Making Programs
8. INTERNET TECHNOLOGY

Syllabus For Statistical Analysis course for Ph.D. Students

1. SOME BASIC CONCEPTS OF STATISTICS

Variable, Population, Sample, Mean, Variance, Parameter, Statistic, Normal distribution, Standard error, Degrees of freedom.

2. TEST OF SIGNIFICANCE

Introduction, Level of significance, null, and alternate, hypothesis, general procedure of test of significance, test of significance for difference of means students t-test, testing significance of difference between two sample means, testing significance of an observed sample correlation coefficient, testing significance of regression coefficient, testing the equality of variances.

3. ANALYSIS OF VARIANCE

Introduction, assumption, model, assumption in the model, degree of freedom, mean sum of square, test statistic, one way analysis of variance, critical difference and bar diagrams two way analysis of variance, (ANOVA) with single observation per cell two way ANOVA with more than one observation per cell.

4. DESIGN OF EXPERIMENT

Introduction, experiment and design, making inferences, principles and designs of experiment-randomization, replication error control, completely randomized design (CRD), layout of CRD, model analysis (ANOVA) advantages and disadvantages of CRD application of CRD randomized block design (RBD) layout of RBD, model, ANOVA, advantages of disadvantages of RBD, Latin square design (LSD) layout of LSD advantages and disadvantages of LSD.

5. FACTORIAL EXPERIMENT

Introduction, layout model, ANOVA advantages and disadvantages, split plot design, main features of split plot design.

6. INCOMPLETE BLOCK DESIGN

Introduction, balanced incomplete block design parameter condition, layout of entire systematic BIBD, model, ANOVA, advantages and disadvantages.

7. SAMPLING TERMINOLOGY AND CONCEPTS

Population, sampling units frame sample intensity some common methods of probability sampling, population total and population mean-population variance, coefficient of variation-parameter estimator estimate bias in estimation sampling variance standard error accuracy and precision confidence limits.

8 SIMPLE RANDOM SAMPLING

Definition Method of selection of random sample, notations, estimate of population mean and sampling variance- A practical demonstration of the theory of simple random sampling- Ratio method estimation- sampling with probability proportional to size of sampling units- Methods of selection a sample and examples.

9 STRATIFIED SAMPLING

Basis of stratification-number of strata- allocation of sample within the strata-selection of units within the strata- notation- estimation of mean and variance, standardization sampling – guidance to stratification, stratified sampling with units in each strata and examples.

10 SYSTEMATIC SAMPLING

Introduction- a simple example- periodicity in population meaningful ordering of the unit's estimation of precision from a systematic sample

11 CHOICE OF SAMPLE SIZE (SAMPLING INTEREST)

Choice of basis of sampling units- size of samples for a desired precision or cost-simple random sampling – stratified random sampling examples.

12 DOUBLE SAMPLINGS

Introduction- regression and ratio estimation in double sampling examples.

13 POINT SAMPLINGS

Introduction – instrument used in point sampling explanation of the method-definition of terms used in point sampling. Theory of points sampling. Particular cases-basal area per hectare- number of stems per hectare- volume per hectare- practical.

14 MULTIVARIATE INTRODUCTION

- (i) Out line of multivariate methods.
- (ii) Multivariate normal distribution
- (i) Clustering
- (ii) Discriminant analysis

15 CORRELATION AND REGRESSION

Introduction, Pearson's coefficient of correlation, rank and correlation, partial correlation, multiple correlation. Introduction of regression, line of regression, regression coefficient.

Multiple regression with one variable, linear combination and regression coefficient, multicollinearity.

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This is to certify that Mr./Ms./Mrs.
.....enrolment no..... carried out
research work under Dr..... of (Name of the Center)
..... The topic of the research registered
with FRI Deemed University was
..... The scholar presented his/her work in the pre-
thesis submission seminar held on and the RAC found the work
to be satisfactory and approves the work to be presented in the form of thesis for
evaluation by examiners for "Award of Ph.D. Degree" by FRI Deemed
University.

Supervisor

Head of Division

ExpertMember
Member

Expert Member

Expert

Chairman RAC

APPENDIX-4

Performa of the minutes of meeting of RAC for Synopsis Seminar

- i) Name of Candidate:
- ii) Date of meeting:
- iii) Topic as recommended :
- iv) Institute's name:
- v) Division:
- vi) Chairman's Name:

- vii) Expert member's names:
 - (1)
 - (2)
 - (3)
 - (4)
- viii) Supervisor's name:
- ix) Co-Supervisor's name:
- x) Head of Division (Member Secretary):
- xi) Suggestions if any:

- xii) Name of Discipline for which registration is recommended:
(which will be recorded in the Degree certificate as per clause 3.3 of the Ph.D. ordinance. The decision of the office of the FRI Deemed University shall be final)

- xiii) Courses recommended if any:
(as per clause 6.12 of the Ph.D. ordinance)

- xiv) Whether to be registered as PhD Scholar:

Signatures of the Members of the RAC