

# ORDINANCE FOR Ph.D. DEGREE PROGRAMME-2022

Vardhman Mahaveer Open University, Kota (Rajasthan)

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### **O.8.2 ORDINANCE FOR Ph.D. DEGREE PROGRAMME**

### O.8.2.1 General:

The Degree of Doctor of Philosophy (Ph.D.) as per the conformity of University Grants Commission (Minimum Standards and Procedure for Award of Ph.D. Degrees Regulations, 2022 notification dated 7th November, 2022) shall be awarded by the University to a registered student on his/her successful completion of the prescribed programme of research offered in different subjects/disciplines existing in the Schools. Research studies leading to the award of the Doctor of Philosophy (Ph. D.) degree shall be organised and managed by the following bodies in accordance with their respective roles as specified here under. The Ph.D. programme will be run in accordance with the norms led by the UGC (Amended time to time), and will run in regular mode only.

### (a) Academic Council:

The Ph.D. Degree Programme of the University shall be offered in accordance with the Research Policy adopted by the Academic Council subject to the provision of the Act and the Statutes of V. M. Open University, Kota.

### (b) **Research Board:**

There shall be a Research Board which is subject to the overall guidance and supervision of the Academic Council and shall be responsible for the planning, management, organization and monitoring of the Ph.D. Degree programme.

The Research Board shall perform the following functions:

- I. Management and Administration of the research policy and programme of the University.
- II. Formulation of guidelines for registration, supervision, programme evaluation and award of Ph.D. degree, including appointment of supervisors and examiners, award of scholarships/fellowships and approval of research topics.
- III. Monitoring of level of research as deemed fit for such evaluation.
- IV. Determination of the criteria for review of the research areas/themes/topics relevant to the concerned subjects.
- V. Recommend a person for award of Ph. D. degree on the basis of his/her outstanding published research work.
- VI. Advise on research priorities and allocation of resources for research.
- VII. Preparation of the consolidated reports on research in the University and any other work related to research development and coordination.

### **O.8.2.2** Composition of the Research Board:

The Research Board shall consist of the following:

Vice-Chancellor	Chairperson		
All the Professors*	Member		
Representative of Academic Council	Member		
(To be nominated by the Vice-Chancellor)			
Directors of Schools	Member		
Research Supervisor	Member		
Director, Research	Member Secretary		

Note:

- (i) \*In case there is no Professor in the subject/discipline, the Vice-Chancellor may nominate the Professor(s) of the concerned subject/discipline from other universities.
- (ii) Director (Research) shall act as Secretary of the Research Board.
- (iii) The term of office of the nominated members shall be of two years from the date of nomination. A member can be re-nominated for another term. One-third of the total membership shall form the quorum for the meeting.

There shall be a **Research Advisory Committee** for each Ph.D. scholar. The Research Supervisor of the scholar shall be the convener of this Committee.

Research The Advisory Committee will be constituted by the Director of the concerned school. The Research Advisory Committee will consist of the following members

- 1. Research Supervisor
- Convener
- 2. All Faculty members (Relevant to the concerned Subject) of the concerned School Member
- 3. One faculty member from the school Member

If, the RAC quorum (minimum 2 members) is incomplete, then, Vice-Chancellor shall nominate member from any other school. In absence of supervisor/convener Director of the concerned school shall act as Advisory Convener.

This Committee shall have the following responsibilities:

- To review the research proposal and finalize the topic of research for approval of the Research Board;
- To guide the research scholar to develop the study design and methodology of research and identify the course(s) that he/she may have to do.
- To periodically review and assist in the progress of the research work of the research scholar.
- A research scholar shall submit a six monthly progress report to Research Advisory Committee for evaluation and further guidance. The six monthly progress reports shall be submitted by the Research Advisory Committee to the Director Research with a copy to the research scholar.
- In case the progress of the research scholar is unsatisfactory, the Research Advisory Committee shall record the reasons for the same and suggest corrective measures within stipulated time. If the research scholar fails to implement these corrective measures, the Research Advisory Committee may recommend to Director Research with specific reasons for cancellation of the registration of the research scholar.

# O.8.2.3 Procedure for Admission

Admission in PhD will be notified in advance on the institutional website and through advertisement in at least two national newspapers, of which at least one shall be in regional newspaper, the number of seats for admission, subject/discipline-wise distribution of available seats, criteria for admission, procedure for admission, examination centre(s) where entrance test(s) shall be conducted and all other relevant information.

# (A) Eligibility Criteria

A candidate shall be eligible for admission and pre-registration course work for Ph.

D.programme provided he/she has:

- 1. Candidates for admission to the Ph.D. programme shall have a Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC-7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions.
- 2. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC(non-creamy layer)/Differently-Abled and other categories of candidates as per the decision of the Commission from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

### (B) Admission Procedure:-

- (1) The admission shall be based on the criteria notified by the institution, keeping in view the guidelines/norms in this regard issued by the UGC and other statutory/regulatory bodies concerned, and taking into account the reservation policy of the Central/State Government from time to time.
- (2) Admission to the Ph.D. programme shall be made using the following methods:
- The University shall admit students who qualify for fellowship/scholarship in UGC-NET/UGC- CSIR NET/GATE/CEED and similar National level tests based on an interview. The merit (Qualifying Criteria) as given below. And/or
- ii. The University may admit students through an Entrance Test. Firstly, in the Subjects in which NET/SLET/JRF is not conducted by UGC. Secondly, if sufficient number of applicants are not received under category (i) then Entrance test shall be conducted for the subject(s) concerned. The Ph.D. Entrance Test will have 70% weightage for entrance test marks and 30% for interview. The Entrance Test syllabus shall consist of 50% of research
  - methodology and 50% shall be subject- specific.
- iii. The university shall decide the number of eligible students to be called for an interview based on the number of Ph.D. seats available.

- iv. Students who have secured 50 % marks in the entrance test are eligible to be called for the interview.
- v. A relaxation of 5 % marks will be allowed in the entrance examination for the candidates belonging to SC/ST/OBC/differently-abled category, Economically Weaker Section (EWS), and other categories of candidates as per the decision of the Commission from time to time.

#### **Qualifying Criteria**

In case number of Applications (fellowship/scholarship in UGC-NET/UGC-CSIR NET/GATE/CEED and similar National level tests) received are more than numbers of available vacancy for doctoral program in a particular the merit of students will be determined on the following basis:

S.No.	Particular	Criteria	Weightage	
1.	Interview by the Department Research Committee	Based on Performance in Domain Knowledge (Max. 15)	To be awarded by	
	(Max. 30)	Based on Performance in Research Aptitude (Max. 10)	the DRC based on	
		Based on General Performance in Interview (5)	Interview (Max. 30)	
2.	Academics Performance	Criteria	Weightage	
	(Max. 70)			
2.(A)	Post Graduate Degree	80% and Above	25	
	Performance in the	70% and Above but less than 80%	20	
	Concerned Subject	60% and Above but less than 70%	15	
		55% and Above but less than 60%	10	
		Less than 55%	0	
2.(B)	Graduate Degree	80% and Above	20	
	Performance	70% and Above but less than 80%	15	
		60% and Above but less than 70%	10	
		55% and Above but less than 60%	5	
		Less than 55%	0	
2.(C)	Higher Secondary Board	80% and Above	15	

	Examination/Senior		70% and Above but less than 80%	12
	Secondary Ex Performance	Examination	60% and Above but less than 70%	8
			55% and Above but less than 60%	5
			Less than 55%	0
2.(D)	Secondary	Examination	80% and Above	10
	Performance		70% and Above but less than 80%	7
			60% and Above but less than 70%	5
			55% and Above but less than 60%	3
			Less than 55%	0

### (C) Interview

The successful scholarships candidate(s) and entrance test qualified candidate(s) shall be called for interview on the basis of academic merit. The interview Board shall consist of the Research Board Committee and members nominated by the Vice-Chancellor.

An interview/viva-voce will be organized where the candidates are required to discuss their research interest/area through a presentation. The merit shall be prepared for final admission.

The interview/viva voce shall also consider the following aspects, viz. whether:

- (i) the candidate possesses the competence for the proposed research;
- (ii) the research work can be suitably undertaken at the Institution/College;
- (iii) the proposed area of research can contribute to new/additional knowledge.

# O.8.2.4. Duration of Ph.D. programme

1. Ph.D. Programme shall be for a minimum duration of three years, including course work, and a maximum duration of six (6) years from the date of admission to the Ph.D. programme. All those who are offered fellowships by the University or any other agency registered with the University to pursue a research degree programme of the University on a full-time basis shall belong to the category of full-time students. The Research Board, on the recommendation of the Research Advisory Committee may allow registration of full-time/part time students who do not have fellowship. Candidates for full time research programme shall preferably be permitted having sponsorship / assistantship / fellowship/ any financial support from the University/state or national level agency, etc., however, candidates without any financial support as above, shall not be disqualified to take admission to full time Ph.D programme.

2. A maximum of an additional two (2) years can be given through a process of re-registration as per the Statute/Ordinance of the Higher Educational Institution concerned; provided, however, that the total period for completion of a Ph.D. programme should not exceed eight (8) years from the date of admission in the Ph.D. programme.

Provided further that, female Ph.D. scholars and Persons with Disabilities (having more than 40% disability) may be allowed an additional relaxation of two (2) years; however, the total period for completion of a Ph.D. programme in such cases should not exceed ten (10) years from the date of admission in the Ph.D. programme.

3) Female Ph.D. Scholars may be provided Maternity Leave/Child Care Leave for up to 240days in the entire duration of the Ph.D. programme.

### **O.8.2.5** Course Work:

(a) All candidates admitted to the Ph.D. programmes shall be required to complete the course work prescribed by the Research Department within one semester.
 The candidate(s) shall undertake the course work of 16 Credits which consists of:

S.	Programme Particulars	Module	Duration	Credits
No.				
1.	Research Methodology,	Module-I	1and a half	8
	Publication Ethics and		Months	
S	Computer Application			
2. t	Review of Literature ;	Module-II	1 and a half	
u	Recent Trends &		Months	
d	Techniques and Writing			
e	Skills			
3. n	Level Advance Subject	Module-III	3 Months	8
	knowledge			
Ν				

**OTE**: 75% attendance in the Pre-Ph.D. Course Work both in Module 1&2 and Module III (subject specific) is compulsory to take Course work term end examination . Students will undergo common course work for 8 credits including a "Research and Publication Ethics" course as notified by UGC vide D.O. No. F.1- 1/2018(Journal/CARE) in 2019 and a research methodology course.

The subject based course work for 8 credits (in the department concerned on the basis of recommendation of Research Advisory Committee.) The Research Advisory Committee can also recommend UGC recognized online courses as part of the credit requirements for the Ph.D. programme.

- (b) After six months the candidate(s) shall be examined through Continuous Assessment (CA). A PhD. scholar must obtain a minimum of 55% marks or its equivalent grade in the UGC 10-point scale in the course work to be eligible to continue in the programme and submit his or her thesis.
- (c) 75% attendance in the Pre-Ph.D. Course Work both in Module I&II and Module III (subject specific) will be the criteria to take Term End Course work examination.
- (d) Candidate(s) shall submit a synopsis and make a presentation before the Research Board.
- (e) The candidate(s) shall abide by the decision of the Research Board Committee and Research Advisory Committee.

(f) All full time Research Scholars shall be eligible for 30 days leave in an academic year.

S.No.	Description	Marks
	A. Continuous Assessment (CA)	200 Marks
1.	Five assignments : Three from Module I & II and two f III	from Module 50 Marks
2.	One Presentation of a research proposal on any research	h problem of 10 Marks
	researchers' interest *Synopsis Presentation	*40 Marks
3.	Review of five research papers of different types	50 Marks
4.	Writing One Research Paper	10 Marks
5.	Article /Report Writing	10 Marks
6.	Book review of one book	10 Marks
7.	Writing of 30 references and bibliography in APA Chicago format	, MLA and 20 Marks
	<b>B.</b> Term End Examination (TEE)	100 Marks
	Examination through Subjective type questions. There	
	parts: Part 'A' will consist of four questions (Long A from Module I and Module II. The students have to atter questions. This part will be common for all of irrespective of their subjects. Part 'B' will consist of fi (Long Answer type) from Module III. The students hav any three questions. This part will be subject- specific	the students ve questions
Note	The total aggregate marks obtained by each researcher is will be added to determine his / her performance. The s to ensure 60% of total marks in Continuous Assessme 50% of total marks in Term End Examination (TEE Final result will be declared on the basis of the Continuous Assessment and TEE. A total of 60% mar 'C' in both the part CA and TEE will be necessary for to be declared successful for enrolment in Ph.D. course.	tudents have ent (CA) and ) separately. average of rks or Grade
	The final result will be expressed in Alphabetical Gr Point Scale.	ade on Five
	Range of % ageGrade80 +A (Excellent)71- 80B (Good)60-70C (Average)40- 59D* (Unsatisfactory)Below 40E* (Highly Unsatisfactory)* If a student gets Grade 'D' or 'E' in final resultTEE) then he or she has to again complete the Pre-Fwork.	

# **Evaluation Scheme of Pre-Ph.D. Course Work**

### **O.8.2.6 Registration:**

- i The date of registration shall be the date of admission (Fee deposition).
- ii. Registration letter shall be issued after successful completion of Course Work.
- Note:
  - In case the candidate(s) does not clear course work examination, he/she shall be eligible to take such an examination along with the candidate(s) of the immediately next batch whenever conducted by the University. No further chance will be given.
  - Grades in the course work, including research methodology courses shall be finalized after a combined assessment by the Research Advisory Committee and the Department and the final grades shall be communicated to the Examination Department through Research Department.
  - ✤ A Pre-Ph.D. course work scholar must obtain a minimum of 55% of marks or its equivalent grade in the UGC 7-point scale (or an equivalent grade/CGPA in a point scale wherever grading system is followed) in the course work (separately in both Continuous Assessment (CA) and Term-End-Examination) in order to be eligible to continue in the programme and submit the thesis.
- (iii) The registration of a student may be cancelled due to any of the following reasons:
  - (i) Non-payment of fees
  - (ii) Unsatisfactory progress
  - (iii) Non-compliance with the provision of the ordinance on research
  - (iv) Failure to submit the thesis within the prescribed time limit.
  - (v) Any act of indiscipline by the candidate.
  - (iv) No re-registration is allowed.

### **O.8.2.7** Fee:

The candidate(s) shall be required to pay the fee for the course work and the Ph.D. programme as decided by the University from time to time.

### **O.8.2.8 Supervisor/ Research Supervision:**

1. Permanent faculty members working as Professor/Associate Professor of the University with a Ph.D., and at least five research publications in peer-reviewed or refereed journals and permanent faculty members working as Assistant Professors in the University with a Ph.D., and at least three research publications in peer-reviewed or refereed journals may be recognized as a Research Supervisor in the university. However, Co-Supervisor can be allowed in inter-disciplinary areas from other departments of the same university with the approval of the Research Board.

2. Every student registered for the Ph.D. programme shall be required to pursue the programme under a supervisor from the University.

3. The allocation of Research Supervisor for a selected research scholar shall be decided by the University Research Board Committee depending on the number of scholars per Research Supervisor, the available specialization among the Supervisors and research interests of the scholars as indicated by them at the time of interview/viva voce.

4. In case of relocation of Ph.D. woman scholar due to marriage or otherwise, the research data shall be allowed to be transferred to the University to which the scholar

intends on willingness of the supervisor and on the recommendation of Research Advisory Committee and permitted by the Research Board.

5. No person shall be permitted to supervise or evaluate the research work of his/her close relations. The term close relation includes wife/ husband/ son/ daughter/ grandson/ grand- daughter/ brother/ sister/ nephew/ niece/ grand-niece/aunt/first cousin/ son-in-law /daughter-in-law.

6. The maximum number of students of Ph. D. Programme, registered under a Supervisor at a time shall be as under:

(a) Professor:	8 students
(b) Associate Professor:	6 students
(c) Assistant Professor:	4 students

7 <u>Faculty members with less than three years of service before superannuation shall not be</u> allowed to take new research scholars under their supervision. However, such faculty members can continue to supervise Ph.D. scholars who are already registered until superannuation and as a co-supervisor after superannuation, but not after attaining the age of 70 years.

7. In an eventuality of death of the Supervisor, the student on his/her request would be allotted another Supervisor by the Research Board and the entire period of his/her research work until then shall be counted for the purpose of the submission of the Ph. D. thesis.

8. The university shall make appropriate provision so that eligible research supervisors do not refuse to guide research scholars.

9. Admission of International students in Ph.D. programme-

(a) Each supervisor can guide up to two international research scholars on a supernumerary basis over and above the permitted number of Ph.D. scholars as specified above.

(b) The University may decide their own selection procedure for Ph.D. admission of international students keeping in view the guidelines/norms in this regard issued by statutory/regulatory bodies concerned from time to time.

10. At any point, the total number of Ph.D. scholars under a faculty member, either as a supervisor or a co-supervisor, shall not exceed the number prescribed in points 7 and 10.

### O.8.2.9 Submission of Ph.D. Thesis:

- (a) Upon satisfactory completion of course work and approval of synopsis, the Ph.D. scholar shall be required to undertake research work. Before submitting the dissertation/thesis, the Ph.D. scholar shall make a presentation three months prior to the submission before the Research Advisory Committee of the University, which shall also be open to all faculty members and other research scholars/students. During the pre-submission presentation the candidate shall submit two copies of his research work in spiral binding. The feedback and comments obtained from them may be suitably incorporated into the final thesis in consultation with the Research Advisory Committee.
- (b) With the submission of thesis, the student shall also submit a summary of the thesis in approximately 3000-5000 words indicating as to how far the thesis embodies the results of investigations. The summary shall be submitted in four copies along with a soft copy (CD). No thesis shall normally exceed eighty thousand words (excluding footnotes and bibliography). It may be a piece of research work duly characterized either

by the discovery of new facts or by afresh interpretation of facts or theories. In either case it should reflect the student's capacity for critical examination and judgments. It should also be satisfactory as far as its literary presentation is concerned. However, in case a thesis exceeds this limit the student shall be required to obtain special permission of the Research Board. The student shall submit his/her thesis in four copies with one soft copy (CD).

- (c) A Ph.D. scholar shall submit the thesis for evaluation, along with (a) an undertaking from the Ph.D. scholar that there is no plagiarism and (b) a certificate from the Research Supervisor attesting to the originality of the thesis and that the thesis has not been submitted for the award of any other degree/diploma to any other Higher Educational Institution.
- (d) A student shall ordinarily not be permitted to change the scheme of research during the course of the study. In exceptional cases, on recommendation of the Research Advisory Committee and with due justification, the Vice-Chancellor/Research Board may permit change in the scheme.

(e)		
	School	Colour
•	School of Humanities & Social Sciences	Red/Maroon
•	School of Commerce & Management	Yellow
•	School of Continuing Education	White
•	School of Science & Technology	Light Blue
•	School of Education	Pink

(f) The Academic Council shall evolve a mechanism using well developed software and gadgets to detect plagiarism and other forms of academic dishonesty. While submitting for evaluation, the thesis shall have an undertaking from the research scholar and a certificate from the Research Supervisor attesting to the originality of the work, vouching that there is no plagiarism and that the work has not been submitted for the award of any other degree/diploma of the same Institution where the work was carried out, or to any other Institution. The university shall follow plagiarism policies as prescribed by UGC and amended time to time.

#### **O.8.2.10** Evaluation and Awards:

- (a) After receipt of the thesis, along with necessary certificates and the requisite fee deposited in the office of the Director (Research), the Supervisor shall submit a panel of 10 experts who are active researchers/Research Supervisors of the recognized Universities, preferably Professors, for appointment as examiners in the related field. Out of 10 Experts 5 experts should be outside the State. The Vice-Chancellor shall appoint two external examiners from the submitted panel for evaluating the thesis.
- (b) The Ph.D. thesis submitted by a research scholar shall be evaluated by his/her Research Supervisor and at least two external examiners, who are not in employment of the Institution/College, of whom one examiner may be from outside the State/country. The *viva-voce* examination, based among other things, on the critiques given in the evaluation report, shall be conducted by the Research Supervisor and at least one of the two external examiners, and shall be open to be attended by Members

of the Research Advisory Committee, all faculty members of the Department, other research scholars and other interested experts/researchers.

(c) The following provisions shall be applicable for evaluation of a Ph. D. thesis:

(i) If the evaluation reports of the external examiner in case of Ph.D. thesis, is unsatisfactory and does not recommend *viva-voce*, the Institution shall send the dissertation/ thesis to another external examiner out of the approved panel of examiners and the *viva-voce* examination shall be held only if the report of the latest examiner is satisfactory. If the report of the latest examiner is also unsatisfactory, the dissertation/ thesis shall be rejected and the research scholar shall be declared ineligible for the award of the degree.

(ii) In case all the three examiners approve the thesis, the student shall be called upon to appear for a viva-voce examination.

- (d) The student shall undergo a viva-voce examination to defend his/her thesis based among other things, on the critiques given in the evaluation report. The viva-voce shall be open to Research Advisory Committee, all faculty members, research scholars and all interested persons and shall be conducted by the Board of Examiners consisting of the Supervisor and one of the external examiners of the thesis nominated by the Vice-Chancellor for the purpose.
- (e) It is essential for the student to appear for the viva-voce examination.
- (f) If both the examiners (Supervisor and external) conducting the viva-voce are satisfied and recommend, the case shall be forwarded by the Director, Research to the Vice-Chancellor for approval and a provisional certificate may be issued to the student by the Examination Department.
- (g) 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 student may be asked to reappear at a second viva-voce examination within six months. If the student fails to satisfy the viva-voce examiners, second time also, the thesis shall be finally rejected.
- (h) If two examiners recommend that the student be asked to revise/improve his/her thesis, the Vice-Chancellor may permit the student to resubmit the revised thesis on the recommendation of the Supervisor(s).
- (i) In case a student is allowed to resubmit the thesis, he/she shall have to pay a fresh submission fee at the time of submission of the revised thesis.
- (j) In the event of the thesis report not being received from an examiner within a period of three months, the Director (Research) may seek approval of Vice Chancellor for appointment of another examiner on suggestion of research supervisor.
- (k) University shall complete the entire process of evaluation of a Ph. D. thesis, including the declaration of the viva-voce result, within a period of six (6) months from the date of submission of the thesis.

#### **O.8.2.11** Issuing a Provisional certificate

Prior to the actual award of the degree, the degree-awarding Institution shall issue a

provisional Certificate to the effect that the Degree has been awarded in accordance with the provisions of UGC Regulations, 2022.

#### **O.8.2.12** Remuneration to Examiner:

The expert(s) shall be paid TA/DA and remuneration for evaluation of synopsis, thesis and conduct of viva-voce as per the prevailing University rules. The actual postal charges shall be reimbursed to the examiners. Necessary deductions shall be made as per university rules. The rates may be amended by the University from time to time.

### **O.8.2.13** Depository with INFLIBNET:

Following the successful completion of the evaluation process and before the announcement of the award of the Ph.D. degree, the University shall submit an electronic copy of the Ph. D. thesis to the INFLIBNET, for hosting the same to make it accessible to all the Higher Educational Institutions and research institutions.

### **O.8.2.14** Incentives to Research Supervisors

- (i.) The University shall make suitable provisions for accelerating and creating conducive environment for promotion of research in the university.
- (ii) The University shall promote teachers to submit research proposal getting funds from UGC/AICTE/DST/ICSSR etc.
- (iii) The University shall allocate special funds for research projects every financial year.

### O.8.2.15 Removal of Difficulties:

Notwithstanding anything contained in this ordinance, the Vice-Chancellor may take any such measures as may be deemed necessary for removal of doubts/difficulties and to resolve any other extraordinary issue pertaining to research.

\*Any provision that is not covered under the provisions of the above Ordinance shall be referred to the Vice-Chancellor, whose decision shall be final.

### Common Tentative Course Work Syllabus

# Module I

# **Fundamental of Research Methodology**

- Philosophy of Research: Epistemology, Knowledge and its way of validation (truth)
- Methods of Acquiring Knowledge in Historical Perspectives
- Scientific approaches to gaining of Knowledge
- Research Paradigm: Quantitative and Qualitative
- Research: Connotation and Scope
- Meaning and Characteristics of Research
- Types of Research: Fundamental, Applied, Action, Qualitative, Quantitative, Mixed, Experimental, Quasi-experimental, Ex-post facto, Descriptive, Explorative, Historical, and Case study

- Contemporary issues and research
- Ethics and Human values in research
- Intellectual property rights and licensing
- Research Problem: Meaning and features
- Formulation of Research Objectives and Hypotheses

### **Research across the Boundaries**

- Concept and significance of Interdisciplinary, multidisciplinary and trans disciplinary in research process
- Research as an interdisciplinary process
- Research as a multidisciplinary process
- Research as a trans disciplinary process

#### **Research and Publication Ethics**

- Ethics: definition, moral philosophy, nature of moral judgments and reactions
- Ethics with respect to science and research.
- Intellectual honesty and research integrity.
- Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP).
- Redundant publications: duplicate and overlapping publications, salami slicing.
- Selective reporting and misrepresentation of data
- Publication ethics: definition, introduction and importance
- Best practices / standards setting initiatives and guidelines: COPE, WAME, etc.
- Conflicts of interest
- Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types
- Violation of publication ethics, authorship and contributor ship
- Identification of publication misconduct, complaints and appeals
- Predatory publishers and journals PRACTICE

### **ICT applications in Research**

- Introduction to computers and Internet
- Role of computers in knowledge management
- Open Education Resources and Research
- Plagiarism and ICT in Research
- Introduction to Windows XP/Vista
- Introduction to operating systems- handling different operating systems PC / Mac etc.
- Role of web media for Literature survey
- Using word processing software MS Word / Latex / others,
- Data analysis and Computer
- Drawing graphs and diagrams through computer
- Know how of Power point presentation

### Module II

### **Review of Literature / Recent Trends & Writing Skills in Research**

- Role of library in Research process
- Techniques of Research Paper Review

- Techniques of Article Review
- Techniques of Book Review
- Basic Principles of Writing Research Paper
- Basic Principles of Abstract Writing
- Know How of Seminar, Conference, Convention, Symposium, Workshop & Brain Storming
  Session
- Literature survey & review writing
- Research and writing skills

### **Research Technicalities**

- Variables: Independent (Causal), Dependent (Effect), Intervening (Confounding and Extraneous), Qualitative, Quantitative, Continuous, and Discrete
- Measuring Variables on different Scales: Nominal, Ordinal, Interval and Ratio
- Universe, Population, Sampling Frame, Types of Sampling (Probability and Non Probability)
- Tools of Research (Qualitative): Types and their developmental procedure
- Tools of Research (Quantitative): Types and their developmental procedure
- Technical characteristics of research tools: Reliability, validity, objectivity, and norms
- Types of Data: Qualitative and Quantitative
- Univariate, Bivariate and Multivariate Analysis
- Analysis of Quantitative Data: Descriptive statistics (Measures of Central Tendency, Measures of Variability, Measures of Associationship -Spearman, Pearson
- Analysis of Quantitative Data: Inferential statistics (Parametric): Bivariate and Multivariate Analysis
- Analysis of Quantitative Data: Inferential statistics (Non-parametric): Bivariate and Multivariate Analysis:
- Analysis of Qualitative Data- Meta Analysis, Molar Analysis and Content Analy

### **Research Report Writing and Dissemination**

- Basic technicalities of Report Writing
- Structure of Synopsis & Doctoral Dissertation (Thesis)
- Documentation, styles of documentation, use of Footnotes or Endnote
- Citation styles; Style guides with examples (Chicago, APA, MLA)
- How to write References and Bibliography
- Synopsis: Meaning, Significance and Components
- Research Proposals of Minor & Major Projects

# **Module III**

Subject specific research syllabus literature reviews Writing research paper/ report/article Synopsis writing and presentation