



DOCTOR OF PHILOSOPHY IN COMMERCE

Regulations and Curriculum 2019

Department of Commerce

Doctor of Philosophy (PH.D.)

Provisions of the Annamalai University Act 2013

In accordance with the provisions of Section 31 (b) of the Annamalai University Act 2013, the following Annamalai University Ordinance Governing the Award of the Degree of Doctor of Philosophy is prepared with the approval of the Syndicate.

PREAMBLE

The Ph.D. programme aims at training professionals and teachers in the skills and competencies related to the systematic investigation of various issues and problems in the area of their study. Annamalai University awards Ph.D. degree to a candidate who, in accordance with the following regulations, has undergone a course work, has submitted a thesis based on original independent research work done by him/her in any discipline or more than one discipline, has had the thesis adjudicated and approved by a panel of suitably constituted examiners, and has defended the thesis in the presence of experts and the public.

The following guidelines are based on the UGC (Minimum Standards and Procedures for the Award of Ph.D. Degree) Regulations, 2016.

FACULTIES/DEPARTMENTS OFFERING Ph.D. PROGRAMMES

Facilities exist for research leading to the award of Ph.D. Programme in the following Faculties:

Faculty	Ph.D. Programmes
Arts	English, History, Political Science, Public Administration, Economics, Sociology, Social Work, Commerce, Population Studies, Business Administration, Rural Development, Rural Studies, Library & Information Science, Philosophy, Law.
Science	Mathematics, Statistics, Physics, Chemistry, Botany, Plant Biology & Plant Biotechnology, Zoology, Environmental Biotechnology, Bioinformatics, Microbiology, Geology, Applied Geology, Geoinformatics, Biochemistry, Biotechnology, Computer Science, Computer Applications, Sports Biochemistry, Sports Biomechanics, Exercise Physiology, Sports Nutrition, Sports Psychology, Strength & Conditioning.
Marine Sciences	Marine Biotechnology, Marine Microbiology, Marine Food Technology, Marine Biology & Oceanography, Coastal Aquaculture, Ocean Science & Technology.
Indian Languages	Tamil, Hindi, Linguistics, Indian Diaspora and Migration Studies.
Engineering & Technology	Chemical, Chemical Engineering - Biotechnology, Chemical Engineering - Food Technology, Chemical Engineering - Industrial Safety, Civil, Civil & Structural, Computer Science & Engineering, Electrical & Electronics, Electronics & Communication, Electronics & Instrumentation, Information Technology, Mechanical, Manufacturing, Pharmacy.

Faculty	Ph.D. Programmes
Education	Education, Psychology, Physical Education, Yoga.
Fine Arts	Music.
Agriculture	Agronomy, Agricultural Entomology, Plant Pathology, Microbiology, Soil Science & Agricultural Chemistry, Agricultural Botany, Genetics & Plant Breeding, Seed Science & Technology, Agricultural Biotechnology, Horticulture, Agricultural Economics, Agri. Business Management, Agricultural Extension.
Medicine	Physiology, Biochemistry, Pharmacology, Pathology, Microbiology, Community Medicine, General Medicine, Paediatrics, DVL, Psychiatry, General Surgery, ENT, Ophthalmology, Obstetrics & Gynaecology, Orthopaedics, Radio-Diagnosis, Physical Medicine & Rehabilitation, Anaesthesiology, Cardiology, Nursing.
Dentistry	Oral and Maxillofacial Pathology and Oral Microbiology, Oral & Maxillofacial Surgery, Periodontology, Paediatric Dentistry, Orthodontics and Dentofacial Orthopaedics, Prosthodontics and Crown & Bridge, Conservative Dentistry & Endodontics, Oral Medicine and Radiology.

III. ELIGIBILITY CRITERIA

3.1 General Eligibility

For admission to the Ph.D. programme, a candidate has to **fulfill** the following minimum qualifications:

3.1.1 Faculties of Arts, Science, Marine Sciences, Indian Languages, Engineering & Technology, Education, Fine Arts, Medicine (Nursing & Physiotherapy only)

A pass in Master's Degree with a minimum of 55% of marks or equivalent Grade Point Average (GPA) or in an examination recognized as equivalent thereto.

3.1.2 Faculties of Medicine and Dentistry (except Nursing & Physiotherapy)

A Pass in Master's Degree with 50% of marks in the concerned subject.

3.2 Candidates who have passed Master's Degree through Open University system are not eligible to apply; however, candidates who have secured their Master's Degree under (11+1) or (10+2) + 3 + 2 / (10+2)+4+2 / (10+3)+3+2 / (10+2) + 5 pattern of programmes of study are eligible.

3.3.1 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 or for those who obtained their Master's degree prior to 16th September, 1991 in the Faculties of Arts, Science, Marine Sciences, Indian Languages, Education & Fine Arts. 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.

4.3.2 Candidates who have cleared the M.Phil. course work examination 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 following) and successfully completed the M.Phil. Degree programme shall be eligible to proceed to do research work leading to the Ph.D. Degree in the same Institution in an integrated programme. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for these 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.

3.4 Preference will be given to candidates who have passed the UGC JRF / NET / SET (SLET) / Lectureship / GATE / CSIR / ICAR / ICSSR or other fellowship related examinations.

3.5 While granting admission to Ph.D. Programmes, due attention shall be paid to the State Reservation Policy.

3.6 Discipline-wise Eligibility

3.6.1 Faculty of Arts

English

A pass in Master's Degree in English / English & Comparative Literature / English & Communication / English & Functional English / English & English Language Teaching / American Studies / English Language and Literature / English with Computer Applications / English Studies with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

History

A pass in Master's Degree in History / History & Heritage Management / Ancient History & Archaeology / History & Tourism Management and any other Masters Degree relevant to the field of History with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Political Science

A pass in Master's Degree in Political Science / International Relations / Human Rights with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Public Administration

A pass in Master's Degree in Public Administration / Social Welfare Administration / Police Administration / Development Administration with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Economics

A pass in Master's Degree in Economics / Applied Economics / Mathematical Economics / Econometrics / Business Economics / Environmental Economics / Development Studies / Rural Economics / Rural Development / Women Studies / Gender Studies / Business Studies / Disaster Management / Rural Management / Environmental Management with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Rural Development

A pass in Master's Degree in any field of study with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Sociology

A pass in Master's Degree in Sociology / Social Work (MSW) with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Social Work

A pass in Master's Degree in Social Work (MSW) with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Commerce

A pass in Master's Degree (M.Com) in Commerce / Accounting Information System/Accounting & Finance/ International Banking /International Business, Banking and Insurance/Business Intelligence/ Financial Services / Business Studies /Co-operative Management / M.Com. Five Year Integrated Programme/ M.A. Co-operation / M.A. Corporate Secretaryship / Master of Bank Management / Master of Business Studies / Master of Financial Services / International Business/Master of Financial Management and Master of Financial Control with a minimum of 55% of aggregate marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Population Studies

A pass in Master's degree in Population Studies or other interdisciplinary Programmes viz. Hospital Administration / Hospital Management / Project Management / Sociology / Economics / Commerce / Management / Psychology / Geography / Statistics / Social Work / Rural Development / Anthropology / Medicine / Nursing / Public Health / Education / Adult Education Mathematics / Actuarial Science / Population & Development / Master of Health Social Sciences (MHSS) with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised equivalent thereto.

Business Administration

A pass in Master's Degree in Business Administration or a pass in PG programme in Management (their area of research will be restricted to their specialization in their PG degree) with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Library & Information Science

A pass in Master's Degree in Library & Information Science with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Philosophy

A pass in Master's Degree in M.A.(History / Political Science / Sociology) / M.S.W.(Master of Social Work) or any other Master's Degree relevant to the field of Philosophy & Religion with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Law

A pass in Master's Degree in Law (M.L./LL.M.) with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

For Part-time External in addition to the above, they should possess the following requirements.

- 1) In the case of Judges, who have put in not less than 5 years of regular service as Judicial Officers and attended 2 National Seminar and presented at least published 2 research papers in a reputed Law Journal.
- 2) In the case of teachers who have put in 1 year of full-time regular service in the University or any of the Law Colleges and published two research papers in reputed law journal.
- 3) In the case of lawyers and others those who are working in the Research Institutions/Research Departments connected with Law, should have put in at least 5 years professional experience and attended at least two national seminars and Published two research papers in reputed Law journal.

3.6.2 Faculty of Science**Mathematics**

A pass in Master's Degree in Mathematics with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Statistics

A pass in Master's Degree in Statistics with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Physics

A pass in Master's Degree in Physics with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Chemistry

A pass in Master's Degree in Chemistry with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Botany

A pass in Master's Degree in Botany / Herbal Science with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Plant Biology and Plant Biotechnology

A pass in Master's Degree in Plant Biology and Plant Biotechnology / Botany / Plant Sciences / Biotechnology / Molecular Biology / Microbiology / Biochemistry / Genetics / Pharmacology with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Zoology

A pass in Master's Degree in Zoology with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Environmental Biotechnology

A pass in Master's Degree in Environmental Biology with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Bioinformatics

A pass in Master's Degree in Bioinformatics with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Microbiology

A pass in Master's Degree in Microbiology with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Geology / Applied Geology

A pass in Master's Degree in Geology / Applied Geology / Marine Geology / Geo-Physics / Geo-Chemistry with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Geoinformatics

A pass in Master's Degree in Geoinformatics / Geology / Applied Geology / Marine Geology / Geo-Physics / Geo-Chemistry with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Biochemistry

A pass in Master's Degree in Biochemistry / Life Sciences / Molecular Biology / Nutrition and Dietetics (equivalent thereto) / Biochemical Technology / Genomics with a

minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Biotechnology

A pass in M.Sc. / M.Tech. Degree in Biotechnology (Industrial, Plant, Animal, Nano, Medical, Environmental and Microbiology) / Molecular Biology / Biochemistry / Microbiology / Genetics (Plant, Animal, Human and Biomedical Genetics) / Life Sciences / Biomedical Technology / Genomics with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Computer Science / Computer Applications

A pass in M.Sc. (Computer Science / Information Technology / Information Science / Software Engineering / Computer Technology) / MCA with a minimum of 55% or its equivalent grade point average in the relevant discipline of this University or any other University accepted by the Syndicate as equivalent thereto.

Sports Biochemistry

A pass in Master's Degree in Sports Biochemistry with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Sports Biomechanics

A pass in Master's Degree in Sports Biomechanics with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Exercise Physiology

A pass in Master's Degree in Exercise Physiology / Sports Physiology / Sports Science with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Sports Nutrition

A pass in Master's Degree in Sports Nutrition with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Sports Psychology

A pass in Master's Degree in Sports Psychology with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Strength & Conditioning

A pass in Master's Degree in Strength & Conditioning / Sports Physiotherapy / Physical Education with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

3.6.3 Faculty of Marine Sciences

Marine Biology & Oceanography

A pass in Master's Degree in Marine Biology & Oceanography / Biotechnology / Zoology / Botany / Animal Science & Biotechnology / Plant Science & Biotechnology / Biochemistry / Human Genetics / Applied Genetics / Molecular Biology / Microbiology / Industrial Microbiology / Agriculture Microbiology / Pharmacology / Marine Sciences / Conservation of Marine Environment / Forestry / Environmental Sciences / Marine Studies & Coastal Resource Management / Marine Biology & Fisheries with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Coastal Aquaculture

A pass in Master's Degree in Coastal Aquaculture / Biotechnology / Zoology / Botany / Animal Science & Biotechnology / Plant Science & Biotechnology / Biochemistry / Human Genetics / Applied Genetics / Molecular Biology / Microbiology / Industrial Microbiology / Agriculture Microbiology / Pharmacology / Coastal Aquaculture and Marine Biotechnology / Applied Fisheries & Coastal Aquaculture with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Marine Biotechnology

A pass in Master's Degree in Marine Biotechnology / Biotechnology / Zoology / Botany / Animal Science & Biotechnology / Plant Science & Biotechnology / Biochemistry / Human Genetics / Applied Genetics / Molecular Biology / Microbiology / Industrial Microbiology / Agriculture Microbiology / Pharmacology / Chemistry with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Marine Microbiology

A pass in Master's Degree in Marine Microbiology / Marine Biotechnology / Biotechnology / Zoology / Botany / Animal Science & Biotechnology / Plant Science & Biotechnology / Biochemistry / Microbiology / Industrial Microbiology / Agriculture Microbiology / Applied Microbiology / Conservation of Marine Environment with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Marine Food Technology

A pass in Master's Degree in Botany / Zoology / Aquaculture / Biochemistry / Biotechnology / Microbiology / Fishery Science / Animal Science & Biotechnology / Plant Science & Biotechnology / Biochemistry with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Ocean Science & Technology

A pass in Master's Degree in Ocean Science & Technology / Geology / Applied Geology / Geoinformatics / Environmental Sciences / Environmental Engineering / Mathematics / Physics / M.E. Energy Engineering and Management / M.E. Disaster Management and Engineering / M.E./M.Tech. Remote Sensing & GIS /

M.Tech. Coastal Management / M.E./M.Tech. Environmental Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

3.6.4. Faculty of Indian Languages

Tamil

A pass in Master's Degree in Tamil with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

(or)

தமிழ் அல்லாத பிற மொழிப் பாடப் பிரிவுகளில் முதுநிலைப் பட்டம் பெற்றத் தகுதியுடைய விண்ணப்பதாரர்கள் 55% விழுக்காடு மதிப்பெண் பெற்றவர்கள் விண்ணப்பி கலாம்.

குறிப்பு:

முனைவர் பட்டம் பெறும் இவ்வாய்வாளர்கள் இக்கல்வித் தகுதியை வைத்து எதிர்காலத்தில் பணிநியமனம் பதவி உயர்வு போன்றவற்றைப் பெற இக்கல்வித்தகுதி ஏற்படையது ஆகாது.

Hindi

A pass in Master's Degree in Hindi with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Linguistics

A pass in Master's Degree in Linguistics / Translation Studies / any language with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

(Or)

A pass in any Master's degree other than the above with 55% of marks with a condition that the candidate should complete his/her Master's Degree in Linguistics / Translation Studies (through DDE) or post-graduate Diploma in Linguistics / Natural Language Processing before submitting the dissertation. For those candidates the degree will be awarded as Ph.D. in Linguistics (Interdisciplinary).

Indian Diaspora and Migration Studies

A pass in Master's Degree in Indian Diaspora and Migration Studies or other interdisciplinary programmes in Arts or Social Sciences or Humanities or Language with a minimum of 55% marks or in an examination recognized as equivalent thereto.

3.6.5. Faculty of Engineering & Technology

Chemical Engineering

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Chemical Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Chemical Engineering - Biotechnology

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Chemical Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Chemical Engineering - Food Technology

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Chemical Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Chemical Engineering - Industrial Safety

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Chemical Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Civil Engineering

A pass in Master's Degree offered/Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Civil Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Civil & Structural Engineering

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Civil and Structural Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Computer Science & Engineering

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Computer Science and Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Electrical & Electronics Engineering

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Electrical and Electronics Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Electronics & Communication Engineering

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Electronics and Communication Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Electronics & Instrumentation Engineering

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Electronics and Instrumentation Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Information Technology

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Information Technology with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Mechanical Engineering

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Mechanical Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Manufacturing Engineering

A pass in Master's Degree offered / Master's degree notified by AIU as equivalent of any University and recognized as specialization of the Department of Manufacturing Engineering with a minimum of 55% marks or equivalent Grade Point Average (GPA).

Pharmacy

A pass in Master's Degree in Pharmacy / Pharm.D. / any other degree consider as equivalent to Master's degree in Pharmacy with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

3.6.6. Faculty of Education**Education**

A pass in Master's Degree in Education (M.Ed. / M.A.Education) with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Psychology

A pass in Master's Degree in Psychology or other specialization in Psychology (Applied Psychology / Clinical Psychology / Guidance and Counselling / Organizational Behaviour etc.) with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Physical Education

A pass in Master's Degree (M.P.Ed. / M.P.E. / M.P.E.S.) with a minimum of 55% marks or equivalent Grade Point Average (GPA) or in an examination recognised as equivalent thereto.

Yoga

A pass in M.Sc. Yoga with minimum of 55% of marks under 10+2+3+ (P.G.Diploma in Yoga + M.Sc. Yoga (Lateral Entry) / M.Sc. Yoga or equivalent Grade Point Average (GPA) or in an examination as equivalent thereto.

3.6.7. Faculty of Fine Arts**Music**

A pass in Master's Degree in Music / Dance of this University with 55% of marks or equivalent Grade Point Average (GPA) or in an examination as equivalent thereto or any Master's degree with 10 years of established proficiency in Music/Dance.

3.6.8. FACULTY OF AGRICULTURE

1. Candidates with two year Master's degree programmes from Universities recognized by Annamalai University are eligible to apply for Ph.D. programmes of the university.
2. Candidates who have undergone the programme under conventional system should possess not less than a second class Master's degree. The candidates under trimester system should possess a minimum OGPA of 3.00 out of 4.00. For those under semester system 7.00 out of 10.00 is required for various Doctoral programmes. However, this will not applicable to SC/ ST candidates, nominees of State Government / Annamalai university / ICAR / and Government of India to whom a pass in the concerned degree is sufficient.

Table – 1: Eligibility Criteria

Doctoral Degree Programmes	Eligibility
1. Agrl. Business Management	MBA in Agribusiness
2. Agrl. Economics	M.Sc.(Ag.) in Agrl. Economics/ Agrl. Marketing Management.
3. Agrl. Entomology	M.Sc.(Ag.) in Entomology
4. Agrl. Extension	M.Sc.(Ag.) in Agrl. Extension
5. Agrl. Microbiology	M.Sc.(Ag.) in Agrl. Microbiology
6. Agronomy	M.Sc.(Ag.) in Agronomy
7. Genetics and Plant Breeding	M.Sc.(Ag.) in Genetics and Plant Breeding
8. Horticulture	M.Sc (Ag.) Hort. / M.Sc. (Hort.)
9. Plant Pathology	M.Sc.(Ag.) in Plant Pathology
10. Seed Science & Technology	M.Sc.(Ag.) in Seed Science & Technology
11. Soil Science and Agrl. Chemistry	M.Sc. (Ag.) in Soil Science and Agrl. Chemistry
12. Agricultural Biotechnology	M.Sc. (Ag.) in Genetics and Plant Breeding M.Sc. (Ag.) in Agricultural Biotechnology

3.6.9. Faculty of Medicine

Master's Degree with 50% of marks in the concerned subject is the minimum qualification for admission to the Ph.D. Programme for the Faculty of Medicine **(Except Nursing and Physiotherapy)**.

Nursing & Physiotherapy

Masters Degree with 55% of marks in Nursing and Physiotherapy is the minimum qualification for admission to Ph.D. Programme in Nursing and Physiotherapy.

3.6.10. Faculty of Dentistry

Master's Degree with 50% of marks in the concerned subject is the minimum qualification for admission to the Ph.D. Programme for the Faculty of Dentistry.

IV. CATEGORIES OF ADMISSION

There shall be four categories of Ph.D. candidates:

- a. Full-time Scholars, On-campus
- b. Part-time - Internal
- c. Part-time - External (India & Overseas))

4.1 Full-Time Ph.D. Candidates, On Campus

Research Scholars of this category are those who pursue their doctoral research under the guidance of a Research Supervisor in this University campus itself.

4.2 Part-Time Candidates (Internal), On Campus

- 4.2.1 Research Scholars within this category are those who are presently employed on regular basis in this University at the time of applying for the Ph.D. programme.
 - 4.2.2 Those who have joined as Assistant Professors with M.Phil./M.E./M.Tech./M.Pharm./M.Sc.(Agri.)/M.D./M.S./M.D.S. are permitted to register for Ph.D. Programme after one year from the date of joining in the post.
 - 4.2.3 Faculty who do not have an M.Phil. Degree shall register for the Ph.D. Programme after two years from the date of joining in the post, provided they fulfil the eligibility conditions for registration of the Ph.D. Programme as Part-time candidates.
 - 4.2.4 **The Regular Non-Teaching Staff shall register for the Ph.D. Programme after five years from the date of joining in the post, provided they fulfil the eligibility conditions for registration of the Ph.D. Programme as Part-time candidates. The normal office work shall not be affected at any cost, if they are selected for the Ph.D. programme. Their selection for the Ph.D. Programme is subject to the final discretion of the Vice-Chancellor.**
 - 4.2.5 The in-service candidates who register for Ph.D. programme on part-time basis in the Faculties of Medicine and Dentistry shall execute a bond to serve the University for a minimum period of three years after the award of the Ph.D. Degree.
- ##### 4.3 Part-time External (India & Overseas)
- 4.3.1 The number of candidates considered for registration in this category would depend upon the availability of **research supervisors**. The University reserves full rights for the selection.
 - 4.3.2 The candidate shall register under a Research Supervisor who is a member of the **Teaching** Faculty of this University.
 - 4.3.3 The candidates should be employed as Assistant Professor / Associate Professor/Professor in a recognized college/University where facilities for carrying out research work are available and have Postgraduate Departments for Science, Marine Sciences, Engineering, Medical / Dental and Agriculture subjects or Undergraduate Departments for Arts, Fine Arts, Education and Indian Languages subjects, or employed as Research Scientists or similar

cadre in private or Government Institutions/Industrial Units with Research and Development facilities, or Librarians working in Colleges/University or Physical Director working in Colleges/University and who **fulfill** the eligibility conditions. Such candidates can directly register for Ph.D. under suitable supervisor in Annamalai University and they do not require a co-supervisor.

All other eligible candidates whether employed or unemployed shall have a recognized co-supervisor. The co-supervisor may be from college / institution located from the same or nearby town of the candidate.

The co-supervisor should be approved by the University. Generally facilities for research should be **made** available at the place of work of the Candidate. In case where such facility does not exist, the research facility at the place of work of Co-supervisor should be available to the candidate. Otherwise the facilities available in Annamalai University in the respective Faculties shall be extended to the candidates.

4.3.4 The candidate has to produce one month attendance per academic year which will be issued by Supervisor/Co-supervisor.

4.3.5 The following certificates shall be attached with the application:

- i) No Objection Certificate from the employer if employed. **(Annexure-1)**
- ii) Acceptance letter from the Co-supervisor. **(Annexure-2)**

Note: Provision exists for conversion of Full-Time to Part-Time and vice-versa provided the residency and attendance requirements are satisfied.

4.4 Admission of Foreign Students

Students who are selected under various Scholarship schemes, either by the Ministry of Education and Culture or the Ministry of External Affairs, will be given admission on the recommendations/sponsorship of the respective Ministry of Government of India. Self-supporting foreign students seeking admission should possess a Research VISA issued by the Indian Embassies abroad and produce a No Objection Certificate from the Ministry of Education, Government of India, after clearance from the Ministry of External Affairs.

5.3 Scholarships / Fellowship

- i. UGC: Rajiv Gandhi National Fellowship (RGNF) for SC/ST students doing Research work for the award of M.Phil./Ph.D.
- ii. UGC-NET-JRF.
- iii. UGC-BSR Research Fellowship in Sciences for meritorious students in the various faculties (applicable to all Department of Sciences, Marine Sciences, Agricultural Sciences, Engineering Sciences).
- iv. Indian Council of Medical Research (ICMR), Indian Council of Social Science Research (ICSSR), Council of Scientific and Industrial Research (CSIR) Fellowships, New Delhi.
- v. DST-Inspire Programme – Ministry of Science and Technology, New Delhi.
- vi. Indian Council of Historical Research (ICHR) – History Ph.D. Scholars.

- vii. Central Institute of Classical in Tamil Chennai (CICT) (Tamil and Linguistics Ph.D. students).
- viii. The Post-Metric Scholarship will be awarded to the students studying Ph.D. Programme including self finance programmes those who belong to SC/ST community and also converted students whose parents/guardians annual income from all sources does not exceed from ` 2,50,000/-.
- ix. Research Incentive will be granted to SC/ST students doing full time Ph.D. Programme at a rate of ` 50,000/- p.a for 4 years only by Adi Dravidar and Tribal Welfare Department, Chennai.
- x. DST—PURSE Fellowships.
- xi. The students of Annamalai University can avail the Government Scholarships subject to eligibility.

Scholarships Sanctioned by the Government of Tamil Nadu

Application Fee Concession to SC/ST and Converted Christian Students:

Entrance/Programme Application fees concession is granted to students belonging to SC/ST Community and Converted Christian by the Government Tamil Nadu (G.O. No.111. 22.09.1998).

Tuition Fee Concession to SC/ST and Converted Christian Students: Full Tuition fee concession is granted to students belonging to SC/ST community and converted Christian under the rule 92 of Tamil Nadu Education Rules by the Government of Tamil Nadu [92-TNER].

SC/ST Communities and Converted Christian (converted from SC/ST) whose Parent's/Guardian's income from all sources should not exceed ` 2,50,000/-

Other State Scholarships for SC/ST/BC/OBC/EBC students.

Puducherry State Scholarships only for Puducherry SC/ST Students.

"ISHAN UDAY" Scholarship for Northern Eastern Region Students.

Minority Scholarship: Minority Scholarship award on the basis of merit cum means for minority community students.

Higher Education Special Scholarship: In addition to the Post Metric Scholarship, Higher Education Special Scholarship is awarded to the hostel students belonging to SC/ST and Converted Christian community and the number of scholarship is limited by the Government. The Annual income from all sources should not **exceed ` 2, 50,000/- per annum.**

BC/MBC/DNC Scholarship: The Scholarship will be awarded to the Students belonging to BC/MBC/DNC communities whose Parent's/Guardian's income from all sources should not exceed ` 2, 50,000/- per annum.

Fellowship / Scholarship sanctioned by various Funding Agencies:

- 1) UGC Scheme for award of Post Graduate Scholarship for professional courses for SC/ST candidates.
- 2) Post Graduate Indira Gandhi Scholarship for single girl Child: This is only for the Candidate who happens to be a single Girl child of the family (having no brother or sister) and who has taken admission in regular full time Master's Degree

programme in recognised University or a Post Graduate College in conventional basic subject.

Note: For all Scholarships, Income Certificate taken after April, 2019 should be produced.

5.4 University Research Studentship

The University Research Studentship is awarded for certain Ph.D. Scholars every year based on the seniority, research progress work, conduct, and attendance. Those who have been availing/availed the studentship once are not eligible for renewal. Preference will be given to M.Phil. Degree holders.

VI. DEPARTMENTAL RESEARCH COMMITTEE

6.1 Departmental Research Committees shall be constituted **at the commencement of every academic year** for effective coordination of the research activities of the departments. The total number of members of the committee shall not exceed six.

6.2 The following is the constitution of the Departmental Research Committee (hereafter referred to as DRC):

Designation	Members
The Head of the Department (HOD)	Coordinator
The respective coordinator of DDE/ Section Head, if exists	Member
Two Professors/Senior Faculty members nominated by the Vice-Chancellor	Members
One Senior Associate Professor	Member
One Senior Assistant Professor	Member

6.3 The DRC will have the following functions:

- ✓ Selection of candidates for admission to the Ph.D. programme.
- ✓ Allotment of Research Supervisors for students enrolled for the Ph.D. programme **based on the students' preference.**
- ✓ Framing the syllabus for course work.
- ✓ Maintenance of the quality of research.

6.4 If there is any dispute either in the constitution or functioning of the DRC, it shall be brought to the notice of the University administration and the decision of the Vice-Chancellor shall be final.

VII. ADMISSION PROCEDURE

The selection of candidates for provisional admission shall be based on the following procedure:

7.1 The Entrance Test for the Ph.D. programme **(Full time, Part time - Internal, Part time - External (India and Overseas))** will be conducted for all. The process will be coordinated by the Director, Centre for Academic Research (CARE).

7.2 The selection shall be based on marks obtained in the qualifying Degree, Entrance test and an Interview.

- 7.3 The weightage for Qualifying **Degree** Examinations will be given for 50 marks. The Entrance test shall comprise objective type questions to examine the research aptitude, grasp of the subject, intellectual ability and general knowledge of the prospective candidates. The question paper for the Entrance test shall be prepared for one hour duration. Question papers will be **set** and evaluated by the DRC members for 25 marks. The interview will be conducted for 25 marks.
- The cut off marks for the selection shall be fixed as 50%, provided that a relaxation of 5% of marks (from 50% to 45%) shall be allowed for the candidates belonging to SC/ST/OBC (non-Creamy layers)/Differently-abled category in the entrance test.
- 7.4 Candidates with M.Phil. Degree from an approved University, UGC-JRF/NET/ SLET/GATE/CSIR/ICAR/ICSSR qualified candidates and teacher fellowship holders are exempted from the Entrance test but they have to appear for the interview.
- 7.5 The Interview will be conducted by different departments simultaneously following the **written test on the same day**. At the time of interview, the candidates are expected to indicate their choice of area of Research and the Research supervisor.
- 7.6 The allocation of the Research Supervisor for a selected student will depend upon the vacancy, the number of students per faculty member permitted by the University, the available specializations among the faculty supervisors and the research interest of the student as indicated during the interview.
- 7.7 For candidates who wish to undertake interdisciplinary research, there will be two Supervisors – a Research Supervisor in the Department where he/she is registering and a Co-Supervisor in the relevant discipline.
- 7.8 The “Minutes of the DRC” shall indicate the chosen guide and the research area of the candidate.
- 7.9 The Minutes of the DRC together with the **recommendation** will be placed before the Vice-Chancellor, who in consultation with the Head of the Department and the Dean of the Faculty will select and approve the list of students for the Ph.D. programme and Research Supervisor(s).
- 7.10 A candidate provisionally selected for admission for the Ph.D. programme shall join on or before the specified date after paying the prescribed fees and verification of certificates of the qualifying examination(s).
- 7.11 A full time Scholar **admitted** for the Ph.D. degree may be allowed to pursue any one programme at any given time offered by DDE of Annamalai University only.
- 7.12 A full time Scholar shall not undertake any employment either part-time or full time **anywhere**.

VIII. DURATION OF RESEARCH

- 8.1 For full-time Scholars, the minimum duration of Ph.D. is three years for those who join after completing Master's degree and two years for those with M.Phil. For part-time Scholars, the minimum duration of Ph.D. is four years for those who join after completing Master's degree and three years for those with M.Phil.
- 8.2 **Full-time:** A candidate with M.Phil. / Without M.Phil. Can submit his/her thesis after the completion of two years / three years and requires on or before completion of five years from the date of joining.
- 8.2 **Part-time Internal/External:** A candidate with M.Phil. / Without M.Phil. Can submit his/her thesis after the completion of three years / four years and requires on or before completion of five years from the date of joining.
- 8.3 Extension for submission of Ph.D. Thesis

A Ph.D. researcher may be granted two extensions of one year each with the recommendation of the Research Advisory Committee and Deans Committee with the approval of the Vice-Chancellor. However, in special cases (eg. Maternity Leave), women candidates are eligible for three extensions of one year each.

IX. EXTENSION OF TIME & RE-REGISTRATION

9.1. Extension of Time

- 9.1.1 Scholars who do not submit the thesis within the stipulated period as mentioned in Section 8 (2) shall apply for extension of time, 3 months before the completion of the maximum period for submission. Extension of time and the fees to be paid will be considered by the Deans Committee, if the extension is duly recommended by the **RAC**, Head of the Department, and the Dean of the Faculty. Such candidates will be eligible for extension of time for a maximum period of 3 years.
- 9.1.2 The scholar shall enrol as a fresh candidate if he/she fails to submit the thesis within the maximum extension period of 3 years.
- 9.1.3 If a scholar requires a few more months after the expiry of the maximum extension period for the submission of the thesis as per the evaluation of the **Research** Supervisor, duly recommended by the Head of the Department, **RAC** and the Dean of the Faculty, as an exceptional case, the Deans Committee may consider to enable the Scholar to submit the thesis with a penalty. In any case, the time granted shall not exceed 6 months.

9.2. Re-registration

- 9.2.1 If a candidate has made significant progress in his/her work but has not completed his/her thesis even after the expiry of the maximum period and two extensions, he/she will be considered for re-registration with the same topic on the recommendation of the **RAC**, Head of the Department and the Deans Committee and on the basis of his/her published/documented work. He/she has to pay all the prescribed fees.

Note: The candidates will be permitted to submit their thesis only after 6 months from the date of re-registration but before the expiry of 36 months. These candidates are not eligible for any extension **further**.

X. DE-REGISTRATION

The registration of a scholar which exceeded the maximum period stipulated for the programme shall stand cancelled automatically.

10.1 The registration is liable for cancellation if:

- The scholar has not paid the fees within the stipulated time mentioned in Section 5.4 above
- **Two consecutive progress reports are not submitted**
- The performance is not deemed satisfactory by the Research Advisory Committee and cancellation of registration has been recommended.
- The candidate has not submitted the thesis within the maximum period of registration and exhaustion of extensions.
- The candidate is found guilty of plagiarism.
- The candidate contacts the examiner who is the evaluator of the thesis.
- The candidate violates the rules and regulations of the Ph.D. Programme.
- The candidate involves in criminal activity.

10.2 In case the student requests cancellation of his/her registration, **a service charge of ` 1000/- will be charged** for refund of fee and return of original certificates, provided the candidate withdraws from the programme immediately after admission and has NOT attended any of the classes or marked attendance in the department.

10.3 Students who have joined the Ph.D. programme and wish to discontinue need not pay the tuition fees for the subsequent years, but should have paid the fees in full upto the year of study.

10.4 No certificate will be issued unless the candidate has cleared all the arrears of fees, etc., due to the University.

10.5 With regard to any dispute, related to admissions, examinations, remittance of fees, etc., the place of jurisdiction for the purpose of filing a suit or preferring a complaint or taking any legal proceedings against Annamalai University, will be Chidambaram Town only and not any other place.

XI. RESIDENTIAL & ATTENDANCE REQUIREMENTS

The Research Supervisor concerned will decide what constitutes "residence" and where the residential requirement is to be fulfilled, considering the nature of the study and its requirements.

11.1 A Ph.D. scholar may be allowed to stay in the Hostel for a maximum of five years from the date of admission to the Ph.D. programme.

11.2 Full-time scholar will sign the attendance register maintained in the Department on all working days. He/She is expected to put in a minimum of 80% attendance both for the course work examination, and

submission of thesis, failing which the scholar will not be permitted to write the course work examination and to submit the thesis.

- 11.3 A Ph.D Full-time scholar may be permitted to reside outside Annamalai University for the purpose of collecting material / conducting experiments / learning techniques for his/her thesis for a period not exceeding six months during the entire tenure of Ph.D., which shall count as residence at Annamalai University.
- 11.4 Further, in special cases, a Ph. D. Full-time scholar may be permitted to reside outside Annamalai University for the purpose of his / her research for the Ph.D. programme for durations it deems fit, on the recommendation of the Research Advisory Committee and approved by the Vice-Chancellor; and this period too shall count as period spent in residence at Annamalai University. The student shall however produce an attendance certificate from the institution where he/she undertook research during that period.
- 11.5 An employee of the University admitted to the programme leading to the Ph.D. Degree as a part-time internal candidate in accordance with these Ordinances shall be required to work for a minimum of **30** days per annum during the period of research. They shall carry out research work without affecting their regular duty.
- 11.6 **Part time - External** Scholars including those with an M.Phil. Degree are required to mark attendance maintained by the supervisor/co-supervisor for a minimum compulsory period of 30 days per annum during their period of research.
- 11.7 Part time - **External** scholars are required to visit Annamalai University campus on a specified date to appear before **the Research Advisory Committee (RAC)** for review of the progress of their research work.
- 11.8 **The attendance certificate signed by the Research Supervisor/ Co-Research Supervisor shall be sent to the Director, Centre for Academic Research through the respective Head of the Department and the Dean at the time of submission of the Synopsis.**

XII. LEAVE RULES

- 12.1 Leave for a maximum period of 30 days in a year in addition to public holidays may be availed by Ph.D. students with the approval of the Research Supervisor. However, **they are not entitled to any other vacation.**
- 12.2 The women candidates and Persons with Disability (more than 40% disability) may be allowed a relaxation of two years of Ph.D. in the maximum duration. In addition, the women candidates may be provided Maternity Leave/Child Care Leave once in the entire duration of Ph.D. for up to 240 days.

XIII. RESEARCH SUPERVISORS

13.1 Eligibility for Research Supervision

13.1.1 Ph.D. degree holders working as teachers on regular basis in the Departments of Annamalai University and who have completed a minimum of **one year** of service in **this University**.

13.1.2 Faculty of Medicine: Teaching staff members with a P.G. Degree are eligible to function as Research Supervisors for Ph.D. **scholars in their respective Faculties**. Members of the Teaching staff who do not find qualified **research supervisors** in these faculties may be permitted to register under the guidance of the Head of the Department/Division with Co-Supervision by a faculty, specialized in the field from another Department/Division within the University or other recognized **Institutions/Universities**.

13.1.3. Faculty of Dentistry:

i. Faculty members possessing Ph.D. qualification - the Ph.D. qualified faculties who have minimum of 5 years of Post Graduate Teaching Experience and published 3 research articles in an indexed journal (Pubmed/Web of Science) in National/ International level as author or co-author are eligible.

ii. Faculty members not possessing Ph.D. qualification - M.D.S qualified faculties who have minimum of 10 years of Post Graduate Teaching Experience and published 6 research articles in an indexed journal (Pubmed/Web of Science) in National/International level as author or co-author are eligible.

13.1.4 A Research Supervisor will be permitted to register candidates with M.Phil. Degree for Ph.D. guidance **two years prior to their retirement**. Research Scholars will be permitted to continue to work and submit their thesis under the guidance of a retired person only for a maximum period of one year from the date of retirement. If the candidate is unable to submit his/ her thesis within this time, the Head of the Department concerned will suggest a Research Supervisor in consultation with the Research Advisory Committee and Dean.

13.1.5 **A research Supervisor/Co-supervisor who is a Professor, at any given point of time, cannot guide more than Eight (8) Ph.D. Scholars. An Associate Professor as Research Supervisor can guide up to a maximum of Six (6) Ph.D. scholars. And an Assistant Professor as Research Supervisor can guide up to a maximum of four (4) Ph.D. Scholars.**

There shall be no compulsion on or by the Supervisors to hold the full complement of research scholars all the time.

13.1.6 A Research Supervisor is normally eligible to guide only in his/her basic subject/discipline. However, he/she may be permitted to guide in a related subject in which he/she has at least two publications in professionally recognized national/international journals, or authored a book, after

getting approval of the expert in the concerned discipline nominated by the Vice-Chancellor. If there is any dispute in this regard, then the matter shall be referred to the University Administration and the decision of the Vice-Chancellor shall be final in the matter.

- 13.1.7 A **Research Supervisor** shall not be allowed to register a candidate for Ph.D. if the Researcher is blood related to him/her.
- 13.1.8 A Faculty member who accepts an administrative position such as Controller of Examinations, Registrar or Vice-Chancellor shall not function as a Research Supervisor. However, he/she may be allowed to complete the theses of candidates registered with **him/her** and after that he/she cannot register fresh candidates.
- 13.1.9 The Vice-Chancellor shall be empowered to summarily withdraw the **research** supervisor ship of a teacher on grounds of
- Moral turpitude/Sexual Harassment
 - Plagiarism
 - Fraudulent academic claims
 - Any act prejudicial to the reputation of the University without assigning any reason thereof.

13.2 Change of Supervisors and Transfer of Scholars

- 13.2.1 Change of Research Supervisor shall not be permitted as a routine. In exceptional cases, such change may be permitted, if valid reasons are provided by the candidate. The Committee headed by the Vice-Chancellor shall look into the request of the petitioner, if there is any conflict between the scholar and the research supervisor. The Research Supervisor under whom the scholar has originally registered shall give a “No Objection Certificate” and the new proposed Research Supervisor give a “Certificate of Willingness” to guide the candidate. The final decision will rest with the University. However, the Vice-Chancellor, on the recommendation of the Department Research Committee and Deans Committee, has the right to assign a new research supervisor to the research scholar.
- 13.2.2 When the change of Research Supervisor is approved, the candidate shall work for a minimum of one year with the new Research Supervisor if the topic of his/her research is different under the new supervisor, provided he/she fulfils the attendance requirements.
- 13.2.3 The research supervisors who wish to avail leave/lien/deputation beyond a period of SIX MONTHS shall propose a Co-supervisor in the concerned subject for the candidates registered with them, and the fact may be intimated to the University well in advance. The final approval of the proposal rests with the Vice-Chancellor.

XIV. RESEARCH ADVISORY COMMITTEE (RAC)

- 14.1 A Research Advisory Committee shall be constituted with the approval of the University for each candidate [Full-time, Part-time Internal and Part time - External] separately, immediately after his/her admission. The purpose of the Research Advisory Committee is to provide expert opinion on frontline research.
- 14.2 The Research Advisory Committee shall consist of the Head of the Department as Chairperson, the Research Supervisor as the Convener and two experts in the field of the Research Scholar (one intra departmental member and another inter departmental member).
- 14.3 The Research Advisory Committee shall have the following functions:
1. Discuss, advice, and recommend on all matters connected with the candidate's research from admission till the submission of the thesis.
 2. Approve the topic of research and the synopsis.
 3. Assess and approve the progress reports of Ph.D. students in the prescribed format and to report to the University on the fitness or otherwise of the candidate to proceed with his/her research work for the Ph.D.
 4. If necessary, recommend and approve change of title of dissertation / Thesis, change of Supervisor and status of Researcher (full time to part time and vice-versa).
 5. Conduct and supervise the presentation by the candidate of the final draft of his/her proposed thesis for approval before the submission of synopsis of the thesis to the University and to give a certificate to this effect to be submitted along with the synopsis.
- 14.4 The Research Advisory Committee will meet once in six months:
- to scrutinize the research proposal submitted by the candidate.
 - to assess the conduct of experiments/field work, peruse laboratory observation notebooks, data recording and analysis and publication.
 - to review and endorse the Research progress of the candidate periodically.
 - to approve the synopsis of the thesis.
- The Convener will convene the Research Advisory Committee meetings with intimation to the Director, Centre for Academic Research.

XV. COURSE WORK

- 15.1 All Research Scholars (Full-time and Part-time) shall undergo a minimum of three courses of six credits each for a minimum period of one semester as stipulated by the UGC. The course work shall include a course on research methodology. The other courses may involve advanced techniques, latest developments in the field of research, and subjects related to the research problem.
- 15.2 While the minimum number of courses is three, there can be a great degree of flexibility in the number of courses that a research student takes based on the discipline and the area of research.
- 15.3 Candidates already holding M.Phil. Degree and admitted to the Ph.D. Programme, may be exempted from Ph.D. course work, if the area of Research is the same. All other candidates admitted to the Ph.D. Programme shall complete the Ph.D. Course work as prescribed by the RAC / Ph.D. regulation.
- 15.4 The Candidates joined for Ph.D. with M.Phil. Degree, which is in different area/field of research, such candidates should undertake at least one course work in the chosen area of specialization of Ph.D. based on the recommendations of the Research Advisory Committee. (As per the UGC Gazette Notification No. 278 dated 05.07.2016 (Page No.10. Part III – Sec 4 Sl.No.7.6)
- 15.5 The total marks for each course will be 100. The candidate shall secure not less than 50% in the course work examination(s), failing which he/she has to apply within six months after the first appearance. If a candidate does not pass the course work examination in three appearances, his/her registration will be cancelled.
- 15.6 The research scholars shall be required to complete the course work within a period of eighteen months in order to pursue further with their research work. For those who fail to complete the course work within the stipulated time, the RAC may recommend for an extension of six months, if the RAC is convinced of their performance. If not, the RAC may recommend cancellation of registration.
- 15.7 A student is deemed to have cleared any course only if he/she has more than 80% attendance, appeared in the examination and secured a pass.
- 15.8 The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to Grade Point (GP). The sum total performance in each semester will be rated by Grade Point Average (GPA), while the continuous performance will be rated by Overall Grade Point Average (OGPA).
- 15.9 A student who has not secured a minimum of 50% of marks in a course is deemed to have failed in that course. A candidate who has scored a

minimum of 50% or equivalent GPA in a course is deemed to have passed the course.

Scheme of Examinations

The Ph.D Research Scholars (Full-time and Part-time) with M.Com qualification, shall undergo a minimum of three courses of six credits each for a minimum period of one semester as stipulated by the UGC. The course work shall include a course on research methodology. The other courses will be as given below. For those with M.Phil qualification admitted in Ph.D, Course-III is compulsory if the candidate chooses a completely different field of specialization in Ph.D. The credit points and marks distributed are as follows:

Semester	Course	Credit	Total Marks
First	Course -I: Research Methodology	6	100
	Course -II: Financial and Business Organisations	6	100
Second	Course-III: Field of Specialisation	6	100
	1. Dissertation 2. Viva-Voce		Mandatory Mandatory

Course-I: RESEARCH METHODOLOGY (6 CREDITS)

This is Common to all the students of the Department.

Course-II: FINANCIAL AND BUSINESS ORGANISATIONS (6 CREDITS)

This is common to all the students of the Department

Course-III: FIELD OF SPECIALIZATION (6 CREDITS)

There are 11 areas of specialization and the candidate would select an appropriate course based on his/her area of research.

Examination in Course I and II will be held at the end of the first semester and the examination for Course III will be held at the end of the second semester. The syllabus for each course will consist of 5 units.

15.10 For Faculty of Agriculture

15.10.1. A student enrolled for Doctoral program to become eligible for the degree is required to complete 75 credits inclusive of 45 credits of research as detailed below.

	Details	Credit Hours
I.	Major Courses	15
II.	Minor Courses	8
III.	Supporting Courses	5
IV.	Seminar	2
V.	Research	45
	Total	75

- 15.10.2. In a semester, a full time Ph.D. student can register a maximum of 15 credits excluding research. However, the research credits registered should not exceed 12 per semester. The Ph.D. students (Full time/ Part time - Internal / Part time - External) should complete their course work within two semesters in the first year.
- 15.10.3. Requirements for Ph.D. programmer shall also include successful completion of thesis research in the major field of study and submission of thesis thereon.

XVI. TOPIC OF RESEARCH

A candidate shall specify the broad area of his/her research at the time of submission of application for Ph.D. admission.

16.1 Presentation of the Broad Area of Research

The scholars shall present their broad area of research and submit a proposal to the Research Advisory Committee within six months from the date of their admission.

16.2 Change of Topic of Research

Change of the specific area of research may be permitted within one year from the date of admission and request must be submitted with the recommendations of the Research Advisory Committee. In such cases, the minutes of the RAC meeting must include whether the course work undertaken by the candidate is relevant to the new research area and the competence of the research supervisor in this field.

- 16.3 If the Research Advisory Committee is of the view that there is a major change in the specific area of research and is not relevant to the course work undertaken, the candidate will have to go through the process of fresh examination pertaining to the area of research.

XVII. TITLE OF Ph.D. THESIS

- 17.1 Candidates shall give the exact title of the Ph.D. thesis at the time of submission of the synopsis.
- 17.2 The title of the thesis shall clearly reflect the content and context of the research.
- 17.3 Once the synopsis is submitted, there shall be no provision for the change of title.

XVIII. TRAINING

It is mandatory for all Ph.D. scholars to undergo training in Research Methodology in order to adopt Good Research Practices (Section 34). Scholars registering for a research degree shall compulsorily attend these courses immediately after joining in order to inculcate best practices early in their research career.

XIX. PROGRESS REPORTS

- 19.1 The Research Scholars, both full time and part time, shall submit Progress Reports in the prescribed format (Annexure-3) duly endorsed by the Research Advisory Committee once in six months to the Director, CARE until they submit their synopsis.
- 19.2 Failure to submit the progress reports shall result in automatic cancellation of registration.
- 19.3 The minutes of the meeting of the Research Advisory Committee along with enclosures will be sent to the Director, CARE.
- 19.4 The RAC meeting may also be conducted through video conferencing or internet chat if the candidate or the Research Supervisor is in a foreign country.
- 19.5 Candidates who are recipients of fellowships such as JRF/SRF directly from any of the funding agencies/shall send the progress reports and the utilization certificates in the format prescribed by the respective funding agency through proper channel.

XX. PUBLICATION OF RESEARCH PAPERS

- 20.1 The Ph.D. Scholars admitted from 2018-19 batch other than from the Department of Tamil, Hindi and Music have to publish two research articles in Scopus/Web of Science indexed Journals (either published or accepted for publication) is mandatory prior to the submission of their thesis work, otherwise thesis shall not be accepted for submission.
- 20.2 The Ph.D. Scholars admitted from 2018-19 batch in the Department of Tamil, Hindi and Music have to publish two research articles in the UGC listed Journals (either published or accepted for publication) is mandatory prior to the submission of their thesis work, otherwise thesis shall not be accepted for submission.
- 20.3 The research papers shall be attached to the Ph.D. thesis.
- 20.4 The RAC shall certify the quality and authenticity of the publications and ensure that both the candidate and the Research Supervisor are listed as authors of the papers with the correct affiliations.

XXI. PRE-SUBMISSION PRESENTATION

- 21.1 The pre-submission presentation of the thesis is a requirement to enrich the scholar and to fine tune his / her research presentation.
- 21.2 This presentation shall be conducted before the submission of the synopsis in the presence of the RAC, Faculty members, Research Scholars, M.Phil. and/or P.G. Students.
- 21.3 The scholar is expected to present the first draft of the research work or explain the findings/problems faced.
- 21.4 The gathering may suggest ideas/references to be consulted/suggestions to improve the work and so on.

- 21.5 A report on this event along with an attendance sheet shall be forwarded by the Research Supervisor with the endorsement of the RAC and HOD to the Director, Centre for Academic Research.

XXII. SUBMISSION OF SYNOPSIS

- 22.1 The submission of synopsis may be permitted 3 months before the completion of required duration on successful completion of course work examinations.
- 22.2 The Research Scholar shall submit 3 copies of the synopsis approved by the Research Advisory Committee along with a soft copy to the Director, Centre for Academic Research through the Research Supervisor, the HOD and Dean of the respective Faculty. Guidelines for the preparation of the synopsis are appended in Annexure-4.
- 22.3 A model cover page for a synopsis is given in Annexure-5.

XXIII. PANEL OF EXAMINERS

- 23.1 Along with the synopsis, the Research Supervisor is advised to submit the panel of examiners for the candidate through proper channel to the Director, CARE in the prescribed format. A panel of ten examiners (five from foreign countries and five from India) shall be provided by the Supervisor to evaluate the thesis (Annexure-4).
- 23.2 Foreign Examiners may not be insisted upon for the disciplines of Indian Languages such as Tamil, Linguistics, Malayalam, Kannada, Telugu, Hindi and for Fine Arts. The panel may consist of five members within Tamil Nadu and five members outside Tamil Nadu.
- 23.3 In the case of Indian Examiners, the Faculty suggested for appointment as Examiner should hold a Ph.D. Degree with not less than 10 years experience at the Post-Graduate level with publications in National / International Journals in the same or related research area of the thesis to their credit
- 23.4 If the Research Scholar has carried out part of his/her work in another institution, the panel should not include the names of the Scientists with whom he/she worked with.
- 23.5 The Vice-Chancellor will choose one Indian and one overseas Examiner from the panel and will also indicate the order of priority of Examiners from 1 to 5 from the Panel of Indian and Foreign Examiners submitted.
- 23.6 Once the Vice-Chancellor has approved the Panel of Examiners and assigned the priority (order of preference), the Director, CARE shall forward/dispatch the Synopsis to the first Examiner in both the panels and seek their acceptance for evaluation of the thesis.
- 23.7 Once an Examiner accepts the invitation and agrees to evaluate the thesis, the Director, CARE shall arrange to send the thesis for evaluation along with the associated formats, guidelines and framework of assessment.
- 23.8 If any Examiner declines to accept the invitation to evaluate the thesis, the synopsis shall be sent to the next Examiner in the list.

- 23.9 If there is no response from the Examiner two weeks after dispatching the synopsis, the Director, CARE shall send two reminders. If that effort also fails to get a response, the Director, CARE shall send the synopsis to the next Examiner in the respective panel.
- 23.10 If acceptance to adjudicate the thesis is not received from the first panel of examiners within 45 days, the Director, CARE shall call for an additional panel from the Research Supervisor.

XXIV. SUBMISSION OF THESIS

- 24.1 The candidate shall be allowed to submit his/her thesis after the completion of stipulated period. A grace period of 30 days may be allowed to submit the thesis after the prescribed duration. If the thesis is not submitted even after the grace period, the student shall pay the tuition fee for the year.
- 24.2 Five copies of the thesis (in the approved format) shall be submitted together with the submission fee not later than three months after the submission of the synopsis. No dues certificates from the Department and Central Library, Hostel, Stores, etc. must be submitted with the thesis copies. The Research Supervisor shall forward copies of the thesis with the enclosures to the Director, Centre for Academic Research through the HOD and the Dean. A soft copy of the thesis in PDF format as prescribed by Shodhganga, shall also be submitted.
- 24.3 The thesis shall comply with the following conditions to merit award for the Ph.D. degree:
- i. It should be a piece of research work characterized either by finding of new facts or by a fresh approach towards interpretations of facts and theories.
 - ii. It should reflect the candidate's capacity for critical examination and judgment.
 - iii. It should be satisfactory in terms of presentation, adhering to proper methodology of thesis writing.
- 24.4 The thesis shall not exceed 250 pages excluding the Bibliography, Appendices, etc. If it exceeds the specified number of pages, the Research Supervisor should write to University with the reasons and get prior approval from the University. The candidate shall pay a penalty for the excess number of pages as decided by the Deans Committee. The thesis should be in A4 size. The specifications for the preparation of the thesis are given in Annexure-7. A model cover page for a thesis is given in Annexure-8.
- 24.5 The thesis shall be typed on both sides of the page in order to save paper and postage.
- 24.6 The thesis shall contain a Certificate from the guide Annexure-9 specifying that the thesis submitted is a record of research work done by the candidate during the period of study under him/her, and that the thesis has not previously formed the basis for the award of any Degree, Diploma,

- Associate ship, Fellowship or similar title. A statement from the guide indicating the extent to which the thesis represents independent work on the part of the candidate should also be made.
- 24.7 The thesis shall also contain a Declaration by the candidate Annexure-10 that the work reported in the thesis has been carried out by the candidate himself/herself and that the material from other sources, if any, is duly acknowledged and no part of the thesis is plagiarised.
- 24.8 The Ph.D. thesis in the field of Tamil, Linguistics, History and Fine Arts may be submitted in the Tamil Language and for other language subjects in the respective language also.
- 24.9 The title and the certificate for Ph.D. theses in Tamil, Hindi, and Malayalam shall be given in English, besides the respective languages.

XXV. ADJUDICATION OF THESIS

There shall be two Examiners out of whom one shall be from a foreign country and the other within India.

- 25.1 The Board of examiners appointed shall evaluate the thesis and report on the merit of the thesis for the award of the Ph.D. degree. Each examiner is expected to give a detailed report on the thesis, apart from a duly filled in proforma for adjudication supplied by the Director, CARE.
- 25.2 The two examiners shall send the individual reports together with the duly filled in proforma to the Director, CARE.
- 25.3 The Supervisor (Convener) will submit a consolidated report, bringing out the salient points made in the individual reports by the Examiners to the Director, CARE.
- 25.4 Each examiner shall be requested to send his/her report within 45 days from the date of receipt of the thesis to the Director, CARE. The reports sent by e-mail shall be accepted provided the email ID is the same as that given in the panel.
- 25.5 If an examiner(s) fails to send the reports within the stipulated time, the Director, CARE shall send a reminder to him/her immediately after the expiry of the deadline and request him / her to send the report within thirty days. If the concerned Examiner fails to comply even within the extended period, the Director, CARE shall cancel the appointment forthwith and invite the next Examiner from the approved panel to evaluate the thesis.
- 25.6 In the event of a request for more time for the submission of a report or receipt of the report after the appointment has been cancelled or postal delay or loss of report etc. an appropriate decision will be taken based on facts.
- 25.7 If both examiners unanimously recommend the award of the degree, the candidate will be asked to appear for a public Viva-voce examination.
- 25.8 If both examiners give definite recommendation against the award of the degree, the thesis will be rejected.
- 25.9 If one of the examiners recommends the thesis for the award of the degree and the other examiner rejects the thesis, the thesis will be referred to a

- third examiner belonging to the same category (i.e., Indian or foreign) for adjudication.
- 25.10 The third examiner will not be provided with the report of the other Examiners. If the third Examiner recommends the award of the degree, the candidate will be asked to appear for a public Viva-voce examination. If the third Examiner also does not recommend the award of the degree, the thesis will be rejected.
- 25.11 If any examiner has (in his/her report) made some comments and suggested corrections/modifications/alterations and does not insist on resubmission, asking the candidate to carry out the same in the thesis, then the candidate will be informed accordingly through the Research Supervisor (who is the convener of the Viva-voce board). The candidate shall carry out the corrections suggested by the examiners, before the public Viva-voce examination. The Supervisor shall furnish a certificate to this effect together with the list of corrections carried out, endorsed by the HOD and the Dean, to the Director, CARE before the Viva-voce examinations.
Such a thesis shall belong to the category *Recommended for Revision before Viva-voce Examinations*.
- 25.12 If the thesis is recommended to be revised and resubmitted by one or both the Examiners, the points of revision shall be indicated clearly in the report. The necessary corrections shall be carried out, and the revised version resubmitted to the concerned Examiner(s). If the Examiner(s) is/are still not satisfied with the revised version, the thesis will be sent to another examiner. If the revision is accepted by the Examiners, the Viva-voce examination will be conducted.

XXVI. ON-LINE TRACKING SYSTEM

The **Centre for Academic Research (CARE)** shall complete all procedures with respect to thesis evaluation in a timely manner. A Ph.D. researcher after submitting the thesis can track the status of the evaluation of his/her thesis online.

XXVII. PUBLIC VIVA-VOCE / THESIS DEFENCE

If both the Examiners unanimously recommend the award of the degree, the candidate will be asked to appear for a public Viva-voce examination.

- 27.1 The Viva-voce Board shall consist of the Research Supervisor, one of the adjudicators (Indian Examiner – **External Examiner**) and the Head of the Department (Internal Member). The Research Supervisor shall be the Convener of the Viva-voce Board. The reports of the examiners shall be made available to the Convener (**Research** Supervisor) of the Viva-voce board, and the **Co-Research** Supervisor (if any). It is the duty of the **Research** Supervisor to consolidate the results of the Viva-voce Examination.
- 27.2 If the External Examiner so appointed is unable/unavailable to conduct the Viva-voce examinations, one of the Examiners from the Panel of Indian

- Examiners submitted shall be appointed by the Vice-chancellor to conduct the Viva-voce examination.
- 27.3 If the Head of the Department happens to be the Research Supervisor, one of the senior Faculty in the department shall be recommended by the Head of the Department as an Internal Examiner and the same has to be forwarded to the Director, CARE for approval.
- 27.4 The conduct of Ph.D. Viva-voce Examination shall be notified fifteen days before the date of the Viva-voce Examination.
- 27.5 A copy of the thesis will be kept in the Department Library for perusal by those interested in the thesis for at least 15 days preceding the conduct of the public Viva-voce Examination.
- 27.6 The viva-voce examination shall be held preferably on working days.
- 27.7 The purpose of the Viva-voce Examinations is to test the understanding of the Scholar on the subject matter of the thesis and the competence in the general field of study. The Scholar shall be asked to make a brief presentation before the audience and answer the questions raised by the Examiners and the audience.
- 27.8 A candidate who is successful at the public Viva-voce Examination shall be recommended for the award of the Ph.D. degree by the Board of examiners to the Syndicate.
- 27.9 If a candidate fails to defend his/her thesis satisfactorily in the Viva-voce Examination, the candidate may be permitted to reappear for the Viva-voce after a period of three months.
- 27.10 The Viva-voce Board shall **decide** the award of the degree based on the candidate's defence of his/her thesis.
- 27.11 The Viva-voce examination shall be held in all seriousness befitting the solemnity of an examination and no attempt shall be made to treat it as a mere formality. The Candidate/Supervisor shall not indulge in any action that may be perceived as influencing the External Examiner.
- 27.12. Minutes of the Viva-Voce Examination
- 27.12.1 The Supervisor shall submit a comprehensive report of the public Viva-voce examination to the Director, CARE duly endorsed by the External Examiner, together with a list of participants in the examination with their signature, designation and address.
- 27.12.2 The Minutes shall record the performance of the candidate, the answers furnished by the candidate to the questions posed by the Indian and Foreign Examiners **in their Report, Viva-voce board of examiners** as well as by the audience.
- 27.12.3 The Board shall recommend one of the following:
- i. that the degree be awarded
 - ii. that the candidate be re-examined in a second Viva-voce Examination. (This will be done after a period of 3 months).
 - iii. that the degree be not awarded and the thesis be rejected.

- 27.12.4 The Research Supervisor shall then forward the consolidated recommendation to the Director, CARE, along with such other documents as may be required by the University for consideration. The consolidated recommendation will be placed before the Syndicate for its approval **from the date of Viva-voce examination** and the Degree for the approved candidates will be awarded in the convocation in person or in absentia.

XXVIII. PROVISIONAL AND DEGREE CERTIFICATE

- 28.1 After the thesis is approved by the Syndicate, the candidate can apply for the provisional certificate. The provisional certificate shall state that the candidate has undergone course work examination.
- 28.2 The Ph.D. Degree Certificate shall incorporate the title of the thesis along with the name(s) of the Faculty/Faculties and discipline(s).
- 28.3 In the case of the award of the Ph.D. Degree for inter-disciplinary research, the Degree Certificate shall bear both the subjects of the candidate's post-graduate Degree and the discipline of the department in which the candidate has conducted his/her doctoral research mentioning them as "inter-disciplinary."

XXIX. PUBLICATION OF THE THESIS

- 29.1 The thesis, once submitted, becomes the property of the University.
- 29.2 In case the research comes under the "classified" category, it shall not be published without the approval of the Syndicate.
- 29.3 The Syndicate may grant permission for publishing the results/findings based on a written request from the candidate through the Research Supervisor.
- 29.4 In case the thesis does not fall under the "classified" category, the research Scholar may publish his/her thesis results after obtaining necessary permission from the **Vice-Chancellor**.
- 29.5 Two copies of the thesis in its published form must be submitted to the office of the Registrar.

XXX. REPOSITORY OF THE THESIS

- 30.1 Following the successful completion of the evaluation process and before the announcement of the award of the M.Phil./Ph.D. Degree(s), the Institution concerned shall submit an electronic copy of the M.Phil. Dissertation/ Ph.D. thesis to the Shodhganga - INFLIBNET, for hosting the same so as make it accessible to all Institutions/Colleges.
- 30.2. 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, 2016.

XXXI. ETHICAL & LEGAL REQUIREMENTS

- 31.1 All research involving use of all data and material relating to human subjects as well as laboratory animals must be approved by the appropriate Ethical Committees constituted by the University.

- In practice this means that no research in this line can be undertaken until all of the required approvals and authorisations have been given from the Appropriate Ethical committees.
- 31.2 It is the responsibility of the Research Supervisor and the Research Scholar to obtain approval from the relevant committee before initiating the research work.
- 31.3 The Research Supervisors and Scholars shall follow the regulations stipulated by appropriate bodies for undertaking research. Annamalai University has constituted Institutional Committees to scrutinize and approve research proposals.
- 31.3.1 Institutional Psychology Research Ethics Committee (IPREC) for research in Psychology and Institutional Humanities and Social Sciences Research Committee (IHSSRC) for research in the Arts, Humanities and Social Sciences or cognate areas shall scrutinize research proposals to ensure that the dignity, human rights, interests, health, safety and privacy of research participants is protected, that valid consent has been obtained and that the information gained by the research is not outweighed by any costs to the subject in time, effort, discomfort or potential risk. These Committees will also explore potential ethical issues that may arise as the result of a proposed research work.
- 31.3.2 Institutional Technology Ethics Committee (ITEC) will address ethical issues specific to new and emerging technologies in terms of impact on the environment and human well-being.
- 31.4 *Regulations for Studies on Plants:* All research work carried out on transgenic plants shall follow the guidelines laid down by the Department of Biotechnology (http://dbtindia.nic.in/guidelines_98.pdf).
- 31.5 *Regulations for Field work:* Permission for field work shall be obtained from the Departments of Forests, Fisheries, National Biodiversity Authority, Wildlife etc., as appropriate.
- 31.6 *Regulations for Studies on Laboratory Animals:* The Institutional Animal Ethics Committee (IAEC) shall examine proposals involving research on laboratory animals.
- The proposals shall be submitted to the IAEC for evaluation and approval in the prescribed format <http://envfor.nic.in/division/committee-purpose-control-and-supervision-experiments-animals-cpcsea-1#RF>.
 - The conduct of animal studies shall follow the rules for Good Laboratory Practice established by the Committee for the Purpose of Control and Supervision on Experiments on Animals (CPCSEA) under the guidance of an authorized Veterinarian.
 - Project Staff engaged in scientific experiments on animals shall act in conformation with the provisions of the Prevention of Cruelty to Animals

Act, 1960 and breeding of and experiments on animals (Control and Supervision Rules, 1998 Act amended). These provisions are enforced by the CPCSEA.

31.7 *Regulations for Biosafety*: Biosafety rules encompass manufacture, import, export, and storage of micro-organisms, Genetically Modified Organisms (GMOs), and Gene-technology products as supplemented by the Biotechnology Safety Guidelines issued by the Department of Biotechnology (DBT).

31.8 *Regulations for Human Sampling*: The Institutional Human Ethics Committee (IHEC) will scrutinize use of human volunteers and clinical samples for research. Sampling of human tissue and biological fluids shall conform to the Ethical guidelines for biomedical research on human participants (2006), issued by the Indian Council of Medical Research, New Delhi ([http:// www.icmr.nic.in/ ethical.pdf](http://www.icmr.nic.in/ethical.pdf)).

With the burgeoning biomedical and pharmaceutical industry, there is a growing interest in obtaining human tissues for research, validation and commercial purposes. Researchers must be aware of the ethical and legal issues involved in using human tissues and comply with the Human Tissue Act (2004). Informed consent must be obtained.

31.9 Where research is being conducted in collaboration with another institution outside the University, the ethics policies of those institutions should be appended to any proposals to be considered by the Research Ethics Committee of this University, provided the experiments are carried out in this University. If the experiments are carried out in the collaborating institution the procedure may be reversed.

XXXII. RESEARCH ETHICS

Annamalai University is committed to undertaking research with impeccable scientific integrity and in conformity with the accepted code of principles on Good Research Practices (GRP). GRP is concerned with the organizational process and the conditions under which academic research is planned, performed, monitored, recorded, archived and reported. This requires appropriate training and supervision to ensure the highest achievable standards for conducting research. All Research Scholars and Supervisors shall follow these guidelines while planning and executing research.

32.1 Scientific Integrity

All Researchers shall maintain a very high degree of integrity with respect to all aspects of research including application for funding, designing and conducting experiments, analysing data and publication of results.

32.2 Ethical and Legal Requirements

All Researchers must be aware and comply with the ethical and legal requirements relating to human participants, animals disclosures of personal information, biological material transfer and testing, and biodiversity protection before undertaking research. All Researchers are expected to follow the standard procedures for conducting research laid down by relevant scientific and professional bodies.

32.3 Conflict of Interest

A conflicting interest exists when professional judgement concerning a primary interest such as scientific knowledge may be influenced by a secondary interest such as financial gain, personal advancement or personal rivalry. Conflicts of interests may influence interpretation of results. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. All conflicts of interest, perceived, potential or actual, must be declared.

32.4 Safety

A researcher must be aware of the safety precautions and potential hazards of materials and equipment, use, storage and disposal of chemicals, how to deal with spills and accidents and requirement for vaccinations when dealing with biological samples. Equipment used to generate data should be calibrated and serviced regularly to ensure optimal and reproducible performance. A Standard Operating Procedure (SOP) and easily accessible instructions for safe shutdown in case of emergency should be maintained for each equipment.

32.5 Economy

All Researchers shall exercise the principle of economy in the use of resources including infrastructure facilities, equipment and consumables. Regular review meetings shall be conducted by the Research Advisory Committee to assess the progress of research and to decide when to stop experiments.

32.6 Documentation of Data

- 32.6.1 All data must be recorded promptly, accurately, legibly, indestructibly, and signed and dated by the Research Scholar and countersigned by the Supervisor. Confidentiality is important for data publication and protecting intellectual property.
- 32.6.2 All raw data, documents, protocols, specimens and reports shall be retained and archived by the Research Supervisor. Data must be retained intact for a period of at least 7 years from the date of any publication. Proper documentation of data will help in establishing ownership rights, and provide proof against charges of cheating or falsification.

32.7 Publication

Annamalai University encourages Researchers to publish research data while emphasizing the paramount importance of quality over quantity. All Researchers shall refrain from “fudging” and fabricating data. If an error is detected after publication, the corresponding author shall request the journal to publish an erratum. If there are concerns and serious doubts about the authenticity of the data, the authors shall retract the paper from the journal. Any deviation from GRP and indulgence in research misconduct will be dealt with severely as detailed in the ensuing section.

32.8 Dissemination

Results that are published may be disseminated, provided there is no infringement on any Intellectual Property Rights (IPR). However, Researchers must exercise utmost caution in discussing work that is incomplete, unpublished, or pending patent application.

XXXIII. RESEARCH MISCONDUCT

- 33.1 Annamalai University’s policy on defining and dealing with research misconduct adheres to national and international conventions on the issue and the policy statement issued by the Govt. of India on addressing situations **related to national integrity, which is the foundation of research.**
- 33.2 Research or scientific misconduct is defined as fabrication, falsification and plagiarism, self-plagiarism, or deception in proposing, carrying out or reporting research results. However, honest error or differences of opinion cannot be classified as research misconduct.
- 33.2.1 Fabrication that involves making up results and publishing them. A minor form of fabrication is where references are included to give arguments the appearance of widespread acceptance, but are actually fake, and/or do not support the argument.
- 33.2.2 Falsification which refers to manipulation of research materials, equipment, or processes or changing or omitting data or results such that the research is not accurately represented in the research record.

- 33.2.3 Plagiarism that involves the appropriation of another person's ideas, processes, results, or words without giving appropriate credit. Plagiarism also includes deliberate failure to appropriately credit prior work by others thereby giving a false impression of priority (citation plagiarism). Self-plagiarism is also considered as scientific misconduct.
- 33.2.4 Ghost-writing, the practice of commissioning an anonymous writer is also regarded as a form of plagiarism because it undermines the integrity of scientific publication system.
- 33.2.5 **Unacceptable Authorship:**
 Guest authorship refers to granting authorship out of respect for an individual, or because it will increase the likelihood of publication, credibility, or status of the work.
 Gift authorship is credit offered from a sense of obligation, or anticipated benefit, to an individual who has not contributed to the work. Ghost authorship is denying authorship to an individual who has made substantial contributions to the research or writing of a manuscript.
- 33.2.6 Violation of ethical standards in human and animal experiments.
- 33.2.7 Suppression or failure to publish findings adverse to the researchers' interests.
- 33.2.8 Failure to follow established protocols if this failure results in unreasonable risk or harm to humans or the environment and facilitating of misconduct in research by collusion in, or concealment of, such actions by others.
- 33.2.9 Intentional, unauthorized use, disclosure or removal of, or damage to, research-related property of another, including apparatus, materials, writings, data, hardware or software or any other substances or devices used in or produced by the conduct of research.

XXXIV. INVESTIGATION OF RESEARCH MISCONDUCT

- 34.1 A committee duly constituted by the University will investigate complaints of alleged research misconduct by the research Scholar and/or Supervisor.
- 34.2 Confidentiality will be maintained during the investigation including the identity of the individual registering the complaint (complainant).
- 34.3 If the misconduct is unintended, due to an error in interpretation, or the charges are baseless, the complaint will be dismissed. However, a report will be filed in the office.
- 34.4 If the complaint is credible, the committee, after informing the Ph.D. student and Research Supervisor against whom the complaint has been made (the subjects), will assess the authenticity of the charge, and the nature of the misconduct based on the material information available.
- 34.5 The subject will be allowed to defend himself/herself. However, he/she shall provide the Committee access to reports, raw data, electronic records, manuscripts and any other material relevant to the investigation.

- 34.6 The Committee shall complete its investigation and submit its report on the recommended course of action within a period of sixty days.
- 34.7 Annamalai University regards research misconduct as a serious offence and any member of staff/students may raise **bonafide** concerns confidentially and without fear of suffering a detriment. However, if the allegations prove to be made frivolously or with malicious intent, formal action against the complainant will be initiated.
- 34.8 If the charges of misconduct are proved, the subject(s) will be notified and disciplinary action initiated.

Guidelines for the Preparation of Synopsis

The Research Scholar shall be permitted to submit the synopsis three months prior to the completion of his/her minimum duration.

The Research Scholar shall submit a copy of the synopsis of his/her research work prepared in accordance with the format and specification prescribed, to the RAC through the Research Supervisor. If the RAC approves the research work reported in the synopsis, the candidate shall submit three copies of the approved synopsis to the Director, Centre for Academic Research through proper channel.

- 1) Synopsis should contain title of the thesis, outline of the research problem, the methodology used for tackling it, the organization of the thesis, and the summary of the findings.
- 2) The size of synopsis should not exceed 20 pages of typed matter.
- 3) The sequence in which the Synopsis should be arranged is as follows:
 - i. Cover Page/Title page (as shown in the Annexure 8)
 - ii. Text divided into suitable Headings (numbered consecutively)
 - iii. References (not more than 10)

Programme Objective:

The overall programme objective of Ph.D. degree is to empower the Research Scholars to enable them to equip and to gain expertise themselves in the field of Research Methodology, Financial and Business Organizations, Human Resource Management, Organization Behaviour, Business Environment, Entrepreneurial Development, Co-operative Management, Marketing Management, Insurance Management, Technology Banking,

Financial Management, Financial Markets and Services and International Business.

Programme Learning Specific Objectives :

The objective of the programme is to enable the research scholars to:

- PLSO1** Gain expert knowledge in the field of Research Methodology and Business Organisations.
- PLSO2** Ever changing environmental business, Human Resources, Marketing Management, Organizational Behaviour and Entrepreneurial Development, the knowledge can be Gained
- PLSO3** Impart expert knowledge about conducting research in International business with relevant exposure to technology banking and Insurance management.
- PLSO4** Equip the researchers with expert knowledge about the principles and practice co-operation.
- PLSO5** research problem solving and decision making areas in Financial Management and Financial Market and Services

PROGRAMME OUTCOME

- PO1** Critical thinking
- PO2** Cultivating Cognitive skills required in the job market
- PO3** Effective Communication
- PO4** Familiarity with ICT to thrive in the information age
- PO5** Cultivating aptitude for research
- PO6** Respect for alternate view-points including those conflicting with one's own perspectives
- PO7** Ability to work individually and as members in a team
- PO8** Upholding ethical standards
- PO9** Acting local while thinking global

PO10 Commitment to gender equality

PO11 Commitment to Sustainable development

PO12 Lifelong learning

PROGRAMME SPECIFIC OUTCOMES

This Ph.D. Research programme would enable the students to gain proficiency in research methodology and application of research methodological practices in the chosen fields specialisations like Human Resource Management, organisational behaviour, business environment, Entrepreneurial development, Co-operative Management, Marketing Management, Insurance management, Financial Management, Finance Markets and Services and International Business. After completion of this research programme the scholars will be able to

- PSO1** Recall the time tested methodologies and research practices in the chosen field of respective specialisations.
- PSO2** Enable themselves to gain expert knowledge in the research methodology and chosen field of respective specialisations.
- PSO3** Demonstrate the professional skills in the research process and application of the chosen field of respective specialisations.
- PSO4** Identify the problems, prospects, growth and developmental areas of research in the chosen fields of respective specialisations.
- PSO5** Gain competence in the theoretical and conceptual parts of research methodology and expertise in the domain field of research undertaken.
- PSO6** Develop and write the research articles and publications on the chosen fields of respective specialisations.

Semester I

Course I: RESEARCH METHODOLOGY

Credits : 6

Hours : 90

Learning Objectives:

- LO1:** To train the research students to acquire necessary understanding of conducting various types of business research
- LO2:** To impart the research scholars to have a sound knowledge of sampling design, data collection methods and analysis of data
- LO3:** To inculcate in the minds of research scholars to learn the best practices of report writing on ethical basis

Course Outcomes:

After the successful completion of the course, the research scholars will be able to:

- CO1.** Identify the researchable problems and find the appropriate research design for the identified research problem and set objectives
- CO2.** Choose appropriate sampling design for the different types of research designs and research methods
- CO3.** Find and constructs variables from the various sources of data and determine and apply the appropriate tools for analysis for the identified areas of research
- CO4.** Ethically presenting and publishing the research findings in various forms (Journals, books volumes, Edited and Seminars and Conference papers)
- CO5.** Draft the research reports for the Target audience with appropriate styles of reporting in a scientific manner.

Unit I: Types of Research and Research Design

Meaning and Purpose of Research in Social Sciences – Types of research – Pure Research, Applied Research - Analytical, Descriptive, Historical and Experimental Research –Case Study Method - Interdisciplinary Method. Steps in Research – Selection and Formulation of Research Problem – Delimitation of the Scope of the Study – Setting up of the Objectives –Formulation of Hypotheses – Review of Literature – Research Gap in Literature Review.

Unit II: Sampling Techniques and Design

Methods of Sampling – Probability and Non-Probability Methods - Sampling Techniques – Sampling Errors –Sample Size and Bias in Sampling – Types of Sampling and Their Applications - Preparation of Survey Design.

Unit III: Collection of Data and Construction of Research Tools

Sources of Data – Direct and Indirect Sources – Use of Encyclopedias, Research Guides, Handbook etc., Academic Databases for Commerce Discipline. - Use of Internet in Research – Websites, search Engines, E-journal and E-Library – INFLIBNET. Methods of Collection of Data – Principles – Methods of Observation – Interview – Mailed Questionnaire – Interview Schedule – Check Lists – Pre-test and Pilot Study - Construction of Tools – Field Work– Processing of Data and Analysis.

Unit IV: Skill required for Researchers and Application of Ethics

Skill for publication of research articles – Layout of a Research Course, Journals in Commerce - Impact factor of Journals – edited volume – Seminar- Conference proceedings with ISSN and ISBN.. Presentation Skill – Customizing presentation, showing presentation, and printing handouts. Ethical issues in research: Importance and Code of Ethics in Research – Ethics and Research Process – Copy right – royalty -

Intellectual property rights and patent law – Trade Related aspects of Intellectual Property Rights – Reproduction of published material and accountability. – Plagiarism and Self-Plagiarism- Citation and acknowledgement

Unit V: Reporting format and Style of Reporting

Report Writing - Target Audience – (Research Supervisors, Adjudicators, UGC Government- Examiners and Public) -Types of Reports – Steps in Drafting Reports – Charts, Diagrams and Graphs. Contents of Report – Style of Reporting – Thesis and dissertation writing Manuals- Kate L. Turabian Style – MLA Style – APA style- Jonathan Anderson Style manual.

Text Books:

1. Amarchand D 2016 Research Methods in Commerce, Emerald Publication, Chennai.
2. Ghosh B.N 2016 Scientific Methods and Social Research, Sterling Publication New Delhi
3. Willkinson and Bhandarkar 2015 Methodology and Techniques of Social Research, Himalaya Publication, Mumbai.
4. David De Vays 2015 Research Design in Social Research, Saga Publication, New Delhi
5. Gorde WJ and Hatta PK 2014 Methods in Social Research. McGraw Hill, New Delhi

Supplementary Readings:

1. Partha Nath Mukherji 2012 Methodology in Social Research, Dilemmas and Perspectives, Sage Publications New Delhi .
2. Herman J, Ader 2014 Research Methodology in the Social Behavioral and Life Sciences Sage Publications New Delhi.
3. Young PV, 2015 Scientific Social Surveys and Research Prentice Hall of India Private Limited New Delhi.
4. Deepak Chawla Neena Sodhi 2017 Research Methodology, S. Chand and Sons, New Delhi.

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	S	S	L	L	S	L	L	M	M	L	L	L	S	M	S	M	L	M
CO2	S	L	L	S	S	M	L	M	M	L	L	L	S	S	M	S	S	M
CO3	S	L	M	S	S	S	M	S	L	S	S	S	M	M	S	S	M	S
CO4	S	S	S	S	S	L	L	S	M	S	S	S	S	S	M	L	M	S
CO5	M	M	S	S	S	L	L	S	S	L	L	L	S	S	S	S	S	S

* L – Low, M - Medium, S - Strong

SUGGESTED MOOC COURSES:

1. MOOC Material: **Mastering Data Analysis in Excel**, Created by: Duke University, Delivered by: Coursera, Taught by Daniel Egger and Jana Schaich Borg.
2. MOOC Material: **Understanding Research Methods**, Created by: University of London, Delivered by: Coursera, Taught by: J.Simon Rofe and Yenne Lee.
3. **Econometrics: Methods and Applications**, Created by: Erasmus University Rotterdam, Delivered by: Coursera, Taught by: Christiaan Heij
4. **Econometrics: Methods and Applications**, Created by: Erasmus University Rotterdam, Delivered by: Coursera, Taught by: Michek van der Wel,.

Semester I

Course II: Financial and Business Organizations

Credits : 6

Hours : 90

Learning Objectives:

- LO1:** To train the research students to gain expert knowledge in financial management and Indian financial System based on Global and Indian Business Environment.
- LO2:** To impart the scholars to have a sound knowledge of Banking and Insurance and Entrepreneurial Development and Organisational Behaviour
- LO3:** To inculcate in the minds of the scholars to have a deep knowledge on Marketing Co-operation and Human Resource Management

Course Outcomes:

After the successful completion of the course, the scholars will be able to:

- CO1.** Critically evaluate the researchable aspects in Finance and Indian Financial System based on global and in Indian business environment
- CO2.** Gain Proficiency in the functioning of modern banking and Insurance services and entrepreneurship
- CO3.** Explore the environment and entrepreneurial traits of the business research
- CO4.** Analyse the scope of business research in marketing and Co-operation
- CO5.** Learning the researchable areas in Human Resource Management and Organizational behavior

Unit I: Financial Management and Indian Financial System

Nature and Scope of financial management – Objectives – Functions – Changing role of Financial manager – Relationship between Risk and Return – Time Value of money – Concept of value and return. Sources of Long-Term Finances. Nature and Role of Financial System – An overview of the Indian Financial System money market and capital markets stock exchanges in India – Financial Sector Reforms – Instruments in Financial Markets – Legislative Support – Weakness of Indian Financial System.

Unit II: Banking and Insurance

Banking – Meaning – Definition – Main Functions and other Services – Different Types of Banks –Structure, Organizations and Working – Insurance – Basic concept of Risk – Kinds of Business Risks – Basic Principles – Life Insurance-Types of General Insurance. Payment System & Digital banking -Rupay- Rupay Secure- IMPS – National Unified USSD Platform (USSD)-National Automated Clearing House (NACH)-Aadhaar Enabled payment System(AePS-KYC-MICR Vs CTS- Comparison –National Financial Switch (NFS)-Core Banking Solutions- RTGS,NEFT,UPI,CCIL-National Payment Corporation – Forex Settlements, Securities Settlement- Innovative Banking Payment System.

Unit III: Basics of Entrepreneurship and Business Environment

Entrepreneur – Need and Importance– Characteristics – Traits - Functions – Types - Entrepreneurial Motivation – Motivating Factors– Internal Business Environment – External Business Environment – Elements of Business environment-Economic environment- new economic policies-Economic planning-Legal environment of business- Competition Act, Consumer Protection Act-Environment protection- Liberalisation-privatisation-globalisation

Unit IV: Basics of Marketing and Co-operation

Marketing – Concept – Functions of Marketing – Market Segmentation – Market Information System – Consumer behavior – Product decisions- pricing decisions-distributions decisions-promotion decisions-Marketing Research – Types –

Organization for Marketing Research – Planning and Execution of Marketing Research – Formal Research Techniques in Marketing. Cooperation – General Principles – Features – Cooperation Under Planned Economy in India – Role of Government – Research in Cooperation at Different Levels.

Unit V: Introduction to Human Resource Management and Organisational Behaviour Research

Human Resource Management – Significance – Human Resource Planning – Recruitment Policy – Methods – Training – Types – Importance – Building Human Resource Skill – Executive Development – Performance Appraisal – Concept – Features – Methods – Problems and Barriers – in Performance Appraisal – Absenteeism and Labour Turnover – Causes – Methods to reduce Labour Turnover – Labour Welfare – Objectives - Importance – Reasons – Principles – Industrial Relations in India workers participation in management– Significance – Foundations of Individual Behaviour – Individual Differences – Models of Man – Organisational Structure – Meaning – Nature – Elements – Organisational Structure and Employee Behaviour.

Text Books:

1. Prasanna Chandra. 2016 Financial Management', Tata McGraw Hill Publishing Company Ltd., New Delhi.
2. Natarajan. S. and Parameswaran. R, 2015 Indian Banking, S. Chand and Company Ltd., New Delhi.
3. Murthy A. 2016 Principles and Practice of Insurance, Margham Publications, Chennai.
4. Saravanel P 2012 Entrepreneurial Development: Principles Policies and Programmes, Ess Pee Kay Publishers, Chennai.
5. Cherunilam, Francis – Business Environment, Himalaya Publishing House, Bombay, 2012
6. Durgadoss. R., Ilangoan. D 2012 Corporate Governance-An Insight, United Publishers, Mangalore.
7. Philip Kotler, 2012 Marketing Management, Prentice hall, New Delhi.
8. Hajela, T.N., 2012 Cooperation Principles and Problems, Konark Publication, New Delhi.
9. Subba Rao P and Rao. V.S.P, 2015 Personnel/Human Resources Management Text, Cases and Games. Konark Publishers PVT. Ltd., Delhi.
10. Prasad L.M. 2013 Organisational Behaviour. Sultan Chand and Sons, New Delhi.

Supplementary Readings:

1. Maheswari, S.N.2 015 Financial Management, Sultan Chand Ltd, New Delhi.
2. Sayers. R. S, 2016 Modern Banking, Oxford University Press, New Delhi.
3. Laxmi Narin. 2014 Principles of Insurance, S.Chand and Co., New Delhi.
4. Khanka, S.S 2016 Entrepreneurial Development, S.Chand and Co, New Delhi.
5. Prasad L.M, 2015 Business Policy – Strategic Management, Sultan Chand Publications, New Delhi.
6. Nimit Chowdhary 2016 Monika Chowdhary, Textbook of Marketing of Services, TATA McGraw Hill, New Delhi.
7. Sharada, V, 2015 The Theory of Cooperation, Himalaya publishing House,

- New Delhi.
8. Venkata Ratnam C.S.A. and Srivastava B.K. 2016 Personnel Management and Human Resources, Tata McGraw Hill Publishing Company Limited, New Delhi.
 9. Uma Sekaran, Organisational Behaviour 2013 Text and Cases. Tata McGraw Hill Publishing Company Limited, New Delhi.

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	S	M	M	S	S	L	L	S	M	M	S	S	M	S	M	S	S	M
CO2	S	M	M	S	S	M	L	S	M	L	M	M	M	S	S	M	M	S
CO3	S	S	M	M	S	M	S	S	M	S	S	S	M	S	M	M	S	S
CO4	L	L	L	M	S	L	L	S	L	M	M	M	M	M	L	L	S	S
CO5	S	S	M	S	S	M	L	S	S	M	M	M	S	S	S	M	M	S

* L – Low, M - Medium, S - Strong

SUGGESTED MOOC COURSES:

1. **Initiating and Planning Projects**, Created by: University of California, Irvine, Delivered by: Coursera, Taught by: Margaret Meloni.
2. **Financial Engineering and Risk Management Part I (Coursera)**, Created by: Columbia University, Delivered by: Coursera, Taught by: Garud Iyengar and Martin Haugh.
3. **Portfolio and Risk Management** (Coursera), Created by: Indian School of Business (ISB), Delivered by: Coursera, Taught by: Ramabhadran Thirumalai.
4. **Economics of Money and Banking**, Created by: Columbia University, Delivered by: Coursera, Taught by: Perry G Mehrling.
5. **Banking and Financial Markets: A Risk Management Perspective (edX)**, Created by: Indian Institute of Management, Bangalore, Delivered by: EdX, Taught by: PC Narayan.
6. **International Business Environment and Global Strategy (edX)**, Created by: Indian Institute of Management, Bangalore, Delivered by: EdX.

Semester II

Field of Specialization Course III: (3.1) Human Resource Management

Credits : 6

Hours : 90

Learning Objectives:

- LO1:** To enable the research students to have a thorough understanding of management of Human Resources in business enterprises.
- LO2:** To disseminate the knowledge about various methods of recruitment, training and Performance appraisal techniques in business enterprises.
- LO3:** To impart the essentials to the scholars to gain expert knowledge of Leadership and conflict management

Course Outcomes:

After the successful completion of the course, the scholars will be able to:

- CO1.** Expertise the nature of Human Resource Management in academic research
- CO2.** Identify the researchable areas in Recruitment and Selection Process and Motivation as applicable to business enterprises.
- CO3.** Explore the researchable aspects of Grievance Handling and workers' Participation in the managements of public and private enterprises including Multi-national corporations.
- CO4.** Scrutinize the various leadership styles and conflict management process in any business organisation of their choice
- CO5.** Develop the constructs and scales for Human Resource and Behavioral research and application of relevant research tools for desired results.

Unit I Importance of Human Resource Management

Nature and Scope – Importance of HRM – Functions of HRM – Human Resources Management practice in India – Human Resource Policy – Concept – Essential Characteristics - Objectives – Need and Importance – Contents – Procedures – Principles- role and functions of Human resource management- Team Building- Competency Mapping

Unit II: Recruitment and Selection Process & Methods of Motivation

Manpower Planning – Recruitment – Meaning – Importance – Recruitment Policy – Sources – Selection test - Recruitment methods – Recruitment Practices in India – Training Needs – succession planning-Objectives – Appraisal Purpose – Types – Motivation – Meaning – Theories – Rewards – Forms – wage and salary administration- Administering the reward system – Job Satisfaction – Concept – Determinants – Measuring Job Satisfaction – Effects of Job Satisfaction-job analysis- job description and specification, use of job analysis.

Unit III: Grievance, Discipline and Worker's Participation in Management

Grievance – Concept – Nature – Characteristics – Features – Causes – Grievance handling procedure – Discipline – Concept – Nature – Characteristics – Features – Aims and Objectives – Disciplinary Action – Concept – Principles – Procedure – Types or forms of Discipline – Worker's Participation in Management – Concept – Objectives – Purpose – Benefits – Limitations – Worker's participation in Management in India.

Unit IV: Leadership and Conflict Management

Leadership – Types – Styles – Functions – Qualities – Duties and Responsibilities – Conflicts – Sources – Forms – Consequences – Conflict management Strategies – Collective Bargaining – Meaning – Importance – Strategies – Process – Collective Bargaining in Indian Industries – Industrial Relations in India.

Unit V: Tools and Scales as applied to Human Research Management Research

Need for Scaling– Methods – Measurement of Institutional Behaviour Socio metric—Scaling Techniques metric Scales – Procedure for Contributions. Statistical Measures and Their Application to HRM Research Problems – Measures of Central Tendency and Variability – Correlation analysis – Testing of Hypothesis – Z Test – T-Test – Chi-square Test and ANOVA – Non Parametric Statistics in Data Analysis– Factor Analysis- Blooms Taxonomy as related to Commerce Education.

Text Books:

1. Kothari C.R 2016 Research Methodology (Methods and Techniques) New Age International Publications, New Delhi.
2. Subba Rao P. and Rao. V.S.P, 2015 Personnel/Human Resources Management Text, Cases and Games. Konark Publishers PVT. Ltd., Delhi.
3. Ahuja K.K. Personnel Management. 2012 Kalyani Publishers Ludhiana.
4. Memoria C.B. 2013 Personnel Management, Himalaya Publishing House, Mumbai,
5. Davar R.S. 2012 Personnel management and Industrial Relations, Vikas Publishing House Private Limited, New Delhi, Recent Edition, 2012.
6. Sundar K and Srinivasan J 2018 Human Resource Management, Vijai Nicole Imprints Limited, Chennai.

Supplementary Readings:

1. Arun Monappa and Mirza S.Saiyadain. 2012 Personnel Management. Tata McGraw Hill Publishing Company Limited, New Delhi.
2. Tripathi P.C. 2012 Personnel Management, Sultan Chand and Sons, New Delhi.
3. Venkata Ratnam C.S.A. and Srivastava B.K. 2014 Personnel Management and Human Resources, Tata McGraw Hill Publishing Company Limited, New Delhi.

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	L	L	L	L	S	L	M	S	M	L	L	L	L	M	S	S	S	M
CO2	S	S	S	S	S	M	M	S	M	M	M	M	M	S	S	M	M	S
CO3	S	M	S	L	S	S	M	S	S	S	S	S	M	M	S	S	M	S
CO4	M	M	S	M	S	S	M	S	S	S	M	M	L	L	M	M	M	S
CO5	S	S	S	S	S	M	M	M	M	L	L	L	M	M	S	M	M	S

* L – Low, M - Medium, S - Strong

Semester II

Field of Specialization Course III: (3.2) Organisational Behaviour

Credits : 6

Hours : 90

Learning Objectives:

- LO1:** To make the scholars to understand the need and importance of Organisational Behaviour and different dimensions, basically for research purposes
- LO2:** To impart the knowledge to research scholars to gain expert knowledge in Interactive Dimensions of Organisational Behaviour as applicable to public/private enterprising for research purpose.
- LO3:** To make an awareness among the scholars about dynamics of an organization

Course Outcomes:

After the successful completion of the course, the research scholars will be able to:

- CO1.** Conceptualize the behaviour of individuals in business organisation and dynamics of stress which can be proved by academic research.
- CO2.** Discover and study the researchable aspects of group dynamics, Quality of Work life and organisational culture and climate in any business organisations
- CO3.** Analyse and do research about organisational structure and organisational effectiveness in public and private enterprises.
- CO4.** Investigate and analyse the control and communication process and its implications on business organisations
- CO5.** Develop the constructs and scales for Behavioral research and application of relevant research tools so necessary for chosen fields.

Unit I: Introduction to Organisational Behaviour and Different Dimensions

Organisational behaviour – Meaning – Importance – Significance – Factors influencing organizational behaviour – Applying Organisational Behaviour knowledge to Management Practices – Human Behaviour Approach – Process of Behaviour – Individual Differences – Perception – Meaning – Perceptual Process – Factors Affecting Perception – Dynamics of Stress – Concept – Causes – Effects – Coping Strategies for Stress.

Unit II: Interactive Dimensions of Organisational Behaviour

Group Dynamics –Significance - Important to MNCs- Concept of Group – Theories of Group Formation – Group Cohesiveness – Group Decision Making – Quality of Work Life – Evolution and Development of the Concept of Quality of Work Life – Constituents of Quality of Work life – Organisation Development – Some Frequently used Intervention Strategies – Values and Organisational Development - Organisational Culture – Concept – Distinction between Organisational Culture and Organisational Climate – Factors influencing organizational Culture – Morale – Factors influencing morale.

Unit III: Dynamics of Organisation

Organisational Structure – Need – Elements – Organisational Structure and Employee Behaviour – Organisational Effectiveness – Meaning – Approaches to Measure Effectiveness – Factors – Achieving organizational Behaviour – Differential and Integration.

Unit IV: Authority and Communication

Authority – Sources of Authority – Limits of Authority – Status – Control – Concept – Control process – Types of Control – Control and Management by Exception – Behavioural Implications of Control – Communication – Concept – Process – Functions – Direction of Communication Flow – Barriers in Communication.

Unit V: Tools and Scales as applied to Organisational Behaviour Research

Need for Scaling– Methods – Measurement of Institutional Behaviour Socio-metric Scaling Techniques – Procedure for Contributions. Statistical Measures and Their Application to Organisational Behaviour - Research Problems – Measures of Central Tendency and Variability – Correlation analysis – Testing of Hypothesis – Z Test – T Test – Chi-square Test and ANOVA – Non Parametric Statistics in Data Analysis – Factor Analysis - Blooms Taxonomy as related to Commerce Education.

Text Books:

1. Kothari C.R, 2016 Research Methodology (Methods and Techniques) New Age International Publications, New Delhi.
2. Khanka S.S. 2012 Organisational Behaviour. S. Chand and Company Ltd., New Delhi.
3. Prasad L.M. 2013 Organisational Behaviour. Sultan Chand and Sons, New Delhi. 10th Enlarged Edition, 2013.
Aswathappa, K 2012 Organisational Behaviour Text, Cases and Games, Himalaya Publishing Limited, Mumbai, Revised Edition, 2012.

Supplementary Readings:

1. Uma Sekaran, 2013 Organisational Behaviour Text and Cases. Tata McGraw Hill Publishing Company Limited, New Delhi.
2. Ahuja K.K. Organisational Behaviour. 2011 Kalyani Publishers Ludhiana.
3. Jit S. Chandan. Organisational Behaviour. 2011 Vikas Publishing House Pvt. Ltd., New Delhi.

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	M	M	M	S	S	M	M	S	M	S	S	S	M	M	S	M	M	S
CO2	S	M	M	S	S	S	M	S	L	S	S	S	M	S	M	M	S	S
CO3	S	S	M	M	S	L	L	S	S	M	S	S	M	M	S	S	S	S
CO4	S	S	M	M	S	M	L	M	M	S	S	S	M	M	S	M	M	S
CO5	S	S	S	M	S	L	L	M	L	L	L	L	S	S	M	L	L	S

* L – Low, M - Medium, S - Strong

Semester II

Field of Specialization Course III: (3.3) Business Environment

Credits : 6

Hours : 90

Learning Objectives:

- LO1:** To acquaint the researchers with the expert knowledge on Business Environment, both internal and external under the existing policy status.
- LO2:** To provide an insight into the theories of economic, natural and global Environment to the research student for academic research.
- LO3:** To enable the scholars to have an overview of the globalized and digital India whenever necessary for academic research.

Course Outcomes:

After the successful completion of the course, the scholars will be able to:

- CO1.** Examine and study the economic environment and its impact on business
- CO2.** Critically analyse the Economic Planning and Policy framework and its implication on business in India and abroad.
- CO3.** Critically make an in-depth analysis of technological environment and digital India
- CO4.** Investigate and evaluate the MNCs and Foreign Investments in India.
- CO5.** Develop the constructs and scales for research and application of relevant research tools.

Unit I: Economic Environment

Internal Environment – External Environment – The Emerging Scenario – Regulatory Role – Promotional Role – Entrepreneurial Role – Planning Role – Economic Role of the Government in India – The Constitutional Environment – Expansion in State Intervention- Economic Environment.

Unit II: Economic Planning Policy Environment

Industrial Policy, 1991 – An Evaluation of the Policy – Impact of Liberalization – TRIPs and TRIMs – Copy Rights – Role of Government in the Management of TRIPs – MSMEs in India – Problems of MSMEs – Government Assistance – Institutional Arrangement for Rehabilitation of Sick Units – Recent Developments- Legal Environment of Business, Competition Policy- Consumer Protection- Environment Protection.

Unit III: Technological Environment and Digital India

Technological Environment- Concept- Nature of Technological Environment- Elements of Technology and Society- Digital India- Nine Pillars of Digital India - Pay Gov- Digital Locker E-TTAL – Jan DhanYojana- Make in India – Stand up India and Startup India Schemes- National Digital Literacy Mission – National Optical Fibre Net Work – Make in India- Investment Opportunities in India-and Business ethics.

Unit IV: MNCs and Foreign Investments

Multinational Corporations – Government Control Over MNCs – Foreign Institutional Investments (FIIs) – Foreign Direct Investments (FDIs) – Present Position – Role of the Government in the Management of Foreign Investments.

Unit V: Tools and Scales as Applied to Business Environment Research

Need for Scaling – Methods - Measurement of Institutional Behavior - Socio-Metric Scaling Techniques - Procedure for Constructions – Statistical Measures and Their Applications to Business Environmental Research Problems - Measures of Central Tendency- Measures of Variability- Correlation Analysis – Tests of Hypothesis – Z-Test – T-Test – Chi-Square Test and ANOVA – Non-Parametric Statistics in Data Analysis – Factor Analysis- Blooms Taxonomy as related to Commerce Education.

Text Books:

1. Kothari C.R 2016 Research Methodology (Methods and Techniques) New Age International Publications, New Delhi.
2. Aswathappa, K 2012 Essential of Business Environment, Himalaya Publishing House, Mumbai
3. Cherunilam, Francis 2012 Business Environment, Himalaya Publishing House, Mumbai
4. Durgadoss. R., Ilangovan. D 2012 Corporate Governance-An Insight, United Publishers, Mangalore.
5. Ghosh, P.K. 2000 Business Policy – Strategies Planning and Management, Sultan Chand and Co., New Delhi.
6. Michale, V.P 2012 Business Policy and Environment, S. Chand and Co., New Delhi.
7. Charles W.L. Hill 2014 Global Business Today, Tata McGraw Hill, U.K.
8. Gupta S.P.,2014 Statistical Methods, Sultan Chand Publication, New Delhi

Supplementary Readings:

1. Amarchand D 2014 Government and Business, Tata McGraw Hill. New Delhi
2. Cherunilam Francis 2015 Business and Government, Himalaya Publishing House., Mumbai
3. Prasad L.M Business Policy 2013 Strategic Management, Sultan Chand Publications, New Delhi.
4. Premavathy. N, 2016 Business Environment, Sri Vishnu Publications, Chennai.

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	L	L	M	M	S	L	L	M	S	L	L	L	M	M	S	S	M	S
CO2	S	M	L	S	S	L	L	M	S	S	S	S	M	M	M	L	L	S
CO3	S	M	S	S	S	L	L	S	M	M	M	M	M	M	S	L	M	S
CO4	S	S	S	S	S	S	L	S	S	M	M	M	S	S	S	M	M	S
CO5	S	M	M	S	S	M	L	S	M	S	M	M	S	S	M	M	M	S

* L – Low, M - Medium, S - Strong

SUGGESTED MOOC COURSES:

International Business Environment and Global Strategy (edX), Created by: Indian

Semester II

Field of Specialization Course III: (3.4) Entrepreneurial Development

Credits : 6

Hours : 90

Learning Objectives: To make the research students to expertise in

- LO1:** The characteristics essential for entrepreneurs and the role of entrepreneur in economic development in India.
- LO2:** To acquaint the researchers, to have an expert knowledge on Rural Entrepreneurship as well as researchable areas in Entrepreneurial Development.
- LO3:** To enable the scholars to have an overview of technological environment and digital India as applicable for academic research.

Course Outcomes:

After the successful completion of the course, the scholars will be able to:

- CO1.** Groom entrepreneurial qualities and learn the modalities of undertaking research studies in the Entrepreneurial Development.
- CO2.** Critically evaluate the various Entrepreneurial development programme suited for research
- CO3.** Explore and study the dynamics of rural entrepreneurship in research perspectives.
- CO4.** Critically make an in-depth analysis of MSME Schemes and Self help groups problems and prospects by academic research
- CO5.** Develop the constructs and scales for research on entrepreneurship and application of relevant research tools necessary for chosen research study.

Unit I: Basics of Entrepreneurship

Entrepreneur – Need and Importance– Characteristics– Traits - Functions – Types - Entrepreneurial Motivation – Motivating Factors and Methods – Motivation Theories – Achievement Motivation.

Unit II: Entrepreneurial Development Programmes

Entrepreneurial Development Programmes (EDP) – Need - Objectives – Phases of EDP – Training – Institutions Conducting EDPs – Entrepreneurial Growth – Role of Government and Non-Governmental Agencies in Promoting Entrepreneurship – Institutions Assisting Entrepreneurs – DICs – SIDO – NSIC – SIPCOT – TIIC – NIESBUD – TCOs, SIDBI – IDBI – Commercial Banks.

Unit III: Rural Entrepreneurship

Rural Entrepreneurship – Definition – Problems of Rural Entrepreneurship – Overcoming the Problems of Rural Entrepreneur – Rural and Urban Markets – Steps to Promote Rural Entrepreneurship-Green Marketing – Importance-Women Entrepreneurship

Unit IV: Micro, Small and Medium Enterprises

Micro, Small and Medium Enterprises – Registration- Self Help Groups-Problems-Prospects – EDP and Skill Development Programme-District Development Centre-Small Industries Development Bank of India-Subsidiaries and Associates-Refinance and Risk capital-PMMY schemes-Stand-up India and Start-up India.

Unit V: Tools and Scales as Applied for Entrepreneurial Development Research

Need for Scaling - Methods - Measurement of Institutional Behavior - Socio-Metric Scales -Scaling Techniques- Procedure for Constructions – Statistical Measures and Their Applications to Entrepreneurial Research Problems - Measures of Central Tendency- Measures of Variability- Correlation Analysis – Tests of Hypothesis – Z-Test – T-Test – Chi-Square Test and ANOVA – Non-Parametric Statistics in Data Analysis – Factor Analysis- Blooms Taxonomy as related to Commerce Education.

Text Books:

1. Kothari. C.R 2016 Research Methodology (Methods and Techniques) New Age International Publications, New Delhi.
2. Sharma, R.A 2015 Entrepreneurial Change in Indian Industry, Sterling, New Delhi.
3. Saravanavel P2015 Entrepreneurial Development: Principles Policies and Programmes, Ess Pee Kay Publishers, Chennai.
4. Gangadhara Rao N 2015 Entrepreneurship and Growth of Enterprise in Industrial Estates, Deep and Deep Publications, New Delhi.
5. Gupta C.B and N.P. Srinavasan, 2013 Entrepreneurial Development, Sultan Chand and Sons, New Delhi.
6. Gupta S.P 2014 Statistical Methods, Sultan Chand Publication, New Delhi

Supplementary Readings:

1. Vasant Desai, 2012 Entrepreneurial Development, Himalaya Publication, Mumbai.
2. Jasmir Shing, Saini 2012 Entrepreneurship Development, Deep and Deep Publications, New Delhi.
3. Khanka S.S 2012 Entrepreneurial Development, S.Chand and Co, New Delhi.
4. Jayasrisuresh, 2015 Entrepreneurial Development, Margam Publications, Chennai.

Outcome Mapping

CO/ PO	PO 1	P O2	P O3	P O4	P O5	P O6	P O7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	S	S	M	M	S	M	M	S	M	M	M	M	M	M	S	M	S	S
CO2	S	M	L	M	S	L	L	L	L	M	M	M	S	M	M	M	M	S
CO3	M	M	L	M	S	L	L	M	M	M	M	M	M	M	M	M	M	S
CO4	S	S	M	S	S	M	L	M	L	M	M	M	M	M	L	M	S	S
CO5	S	M	M	M	S	S	M	S	L	S	S	S	S	M	M	S	M	S

* L – Low, M - Medium, S - Strong

SUGGESTED MOOC COURSES:

1. MOOC Material: **Entrepreneurship I: Principles and Concepts**, Created by University of Illinois, Delivered by Coursera, Taught by: Patrick James Murphy.
2. MOOC Material: **Essentials of Entrepreneurship: Thinking & Action**, Created by: California, Irvine, Delivered by: Coursera, Taught by: David Standen.
3. MOOC Material: **Initiating and Planning Projects**, Created by: University of California, Irvine, Delivered by: Coursera, Taught by: Margaret Meloni.
4. MOOC Material: **Fundamentals of Project Planning and Management**, Created by: Darden School of Business, University of Virginia, Delivered by: Future Learn, Taught by: Yael Grushka-Cockayne.

Semester II

Field of Specialization Course III: (3.5) CO-OPERATIVE MANAGEMENT

Credits : 6

Hours : 90

Learning Objectives:

- LO1:** To make the scholars gain expert knowledge in Co-operative Movement in India in research perspectives.
- LO2:** To enable the scholars to understand level of availability of credit and non-credit Co-operative financial institutions in India as suited for academic research.
- LO3:** To educate the scholars understand co-operative education and co-operative Law for course work and research.

Course Outcomes:

After the successful completion of the course, the scholars will be able to:

- CO1.** Explore and study the Co-operative Movement in India by research
- CO2.** Evaluate the functioning and impact of credit cooperative institutions suitable for research
- CO3.** Appraise the functioning and impact of non-credit cooperative institutions
- CO4.** Examine the role of cooperative education and co-operative law for research
- CO5.** Develop the constructs and scales for research on co-operation and application of relevant research tools.

Unit I: Co-operative Movement in India

Principles of Cooperation – ICA Principles – History and Growth of Cooperative Movement – Before and After Independence – Role of NABARD in Cooperative Development - Professionalization of Cooperatives – Nature and Functions – Powers of Boards in Cooperatives – Relationship Between the Department and Societies – Cooperative Administration in Tamil Nadu.

Unit II: Credit Co-operative Institutions

Cooperative Banking – Cooperative – Credit Structure – Three Tier and Two Tier Organizations – Objectives – Functions – Cooperative Urban Banks – Employee Credit Cooperatives – Constitution and Working – Problems of Over dues – Causes and Remedies.

Unit III: Non Credit Co-operative Institutions

Non-Credit Cooperatives in India– Organizational Structure – Financial Assistance – Constitution and Working of Industrial Cooperatives, Diary Cooperatives, Housing Societies and Marketing Cooperatives – Problems and Prospects.

Unit IV: Co-operative Education and Co-operative Law

Co-operative Education and Training – Member Education– Need and Importance – Role of National and State Cooperative Unions – State and Cooperative Movement – Cooperative Law – Special Features – Tamil Nadu Cooperative Societies Act 1983 and Cooperative Rules and Regulations – Special Place of Byelaws – Recent Amendment in Cooperatives.

Unit V: Tools and Scales as Applied to Co-operation

Need for Scaling– Methods – Measurement of Institutional Behaviour Socio-metric Scales – Procedure for Contributions. Statistical Measures and Their Application to Cooperatives -Research Problems – Measures of Central Tendency and Variability – Correlation Analysis – Testing of Hypothesis – Z Test – T Test – Chi-square Test and ANOVA – Non Parametric Statistics in Data Analysis – Factor Analysis- Blooms Taxonomy as related to Commerce Education.

Text Books:

1. Kothari C.R 2016 Research Methodology (Methods and Techniques) New Age International Publications, New Delhi.
2. Mathur , B.S ., 2015 Cooperation in India, Sahityabhavan, Agra.
3. Hajela, T.N., 2016 Cooperation Principles and Problems, Konark Publication, New Delhi.
4. Bedi, R.D. 2015 Theory, History and Practice of Cooperation, Rolla Book Depot Merrut(UP).

Supplementary Readings:

1. Sharada, v., The Theory of Cooperation, Himalaya publishing House, New Delhi.
2. The Tamil Nadu Cooperative Societies Act, 1983.
3. Indian Cooperative Movement – A Profile.
4. Gupta S.P Statistical Methods, Sultan Chand Publications, New Delhi.

Journals:

1. The Cooperator, New Delhi.
2. Journal of Rural Development, New Delhi.
3. Journal of Cooperative Management, VAMNICO.M, Pune, Maharashtra.
4. Tamil Nadu Journal of Cooperation, TNCU, Chennai, Tamil Nadu

Websites:

1. <http://www.tncu.tn.gov.in>
2. <http://www.ncui.in>
3. <http://www.ncdu.nic.in>
4. <http://www.vamnicom.org>
5. <http://www.indiadiary.com>
6. <http://www.nafcub.com>
7. <http://www.nabcard.gov>
8. <http://www.nccf-india.com>

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	L	L	L	M	S	M	L	S	L	M	M	M	M	M	M	M	S	S
CO2	M	M	L	L	S	L	L	S	S	L	L	L	M	M	M	S	S	S
CO3	M	M	L	L	S	L	L	S	S	L	L	L	M	M	M	S	S	S
CO4	M	M	L	L	S	L	L	S	S	L	L	L	M	M	M	S	S	S
CO5	S	M	M	M	S	S	M	S	L	S	S	S	S	M	M	S	M	S

* L – Low, M - Medium, S - Strong

Semester II

Field of Specialization Course III: (3.6) Marketing Management

Credits : 6

Hours : 90

Learning Objectives:

- LO1:** To impart the knowledge of various components of Marketing Mix to the research students
- LO2:** To educate the scholars the dynamics of marketing plan and consumerism as suited for academic research
- LO3:** To enable the scholars to grasp the marketing decisions so necessary for their research studies.

Course Outcomes:

After the successful completion of the course, the scholars will be able to:

- CO1.** Critically evaluate and able to identify the researchable aspects of marketing and marketing mix
- CO2.** Identify the researchable areas in marketing plans and consumer behaviour under Indian conditions and international as well.
- CO3.** Examine and do research in the market decisions and emerging trends in globalisation era
- CO4.** Explore and study the Agricultural marketing and services marketing under present marketing environment.
- CO5.** Develop the constructs and scales for marketing research and application of relevant research tools.

Unit I : Marketing and Marketing Mix

Marketing – Process – Concepts – Importance – Functions of Marketing – Marketing mix – Product Policy – Planning and Development – Product Life Cycle – Pricing and Price Policy – Objectives – Methods – Distribution Policy – Selection of Marketing Channels – Promotion Mix – Advertising – Campaign and Media Planning – Advertising Effectiveness – Sales Promotion – Objectives. Green Marketing-Objectives-Importance

Unit II: Marketing Plan and Consumerism

Marketing Environment-Planning for Marketing – Planning as a Corporate Strategy Strategic Process – Preparation of Marketing Plan and Implementation – Marketing Audit – Consumerism – Consumer Movement in India – Consumer Behaviour – Theories – Buying Behaviour-Market Segmentation .

Unit III: Marketing Decisions

Product Decision- Pricing Decision – Distribution Decision – Promotion Decision – Marketing Research – Online Marketing Social – Ethical and Legal Aspects of Marketing in India- Impact of GST on Marketing- Emerging Trends in Global Marketing.

Unit IV: Agricultural Marketing and Services Marketing

Marketing of Agricultural Produce – Problems in Agricultural Marketing – Need for Agricultural price Stabilization – Role of Agricultural Price Commission – Role of Government in Agricultural marketing – Regulated Markets and Market Cooperatives – Marketing of Services – Dimensions of Marketing of Services – Types of Services – Reason for the Growth of Marketing Services.

Unit V: Tools and Scales as Applied To Marketing Research

Need for Scaling– Methods – Measurement of Institutional Behaviour Socio-metric Scaling Techniques – Procedure for Contributions. Statistical Measures and Their Application to Marketing Research Problems – Measures of Central Tendency and Variability – Correlation analysis – Testing of Hypothesis – Z Test – T Test – Chi-square Test and ANOVA – Non Parametric Statistics in Data Analysis – Factor Analysis- Blooms Taxonomy as related to Commerce Education.

Text Books:

1. Kothari C.R 2016 Research Methodology (Methods and Techniques) New Age International Publications, New Delhi.
2. Mamoria, D and Joshi, R.L., 2015 Principles and Practices of Marketing of Services, Kitab Mahal, New Delhi.
3. Philip Kotler, Marketing 2016 Management, Prentice hall, New Delhi.
4. William J. Stanton, 2016 Fundamentals of Marketing, McMillan Publications, New York.
5. Ber G.G., 2015 Marketing Research, TATA McGraw Hill, New Delhi.
6. Gupta S.P 2015 Statistical Methods, Sultan Chand Publications, New Delhi.

Supplementary Readings:

1. Nimit Chowdhary Monika Chowdhary, 2016 Textbook of Marketing of Services, Tata McGraw Hill, New Delhi.
2. Fulmer, R.M., 2012 The New Marketing, McMillan Publication, New York.
3. Bush Kirk Richard, H., 2011 Principles of Marketing, Dryden Press, Illinois.

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	S	S	M	M	S	M	L	M	M	L	L	L	M	S	S	S	M	S
CO2	S	M	M	M	S	M	L	M	M	M	M	M	S	S	M	M	M	S
CO3	S	M	M	M	S	M	L	M	M	M	M	M	S	S	M	M	M	S
CO4	S	M	M	M	S	M	L	M	M	M	M	M	S	S	M	M	M	S
CO5	S	M	M	M	S	S	M	S	L	S	S	S	S	M	M	S	M	S

* L – Low, M - Medium, S - Strong

Semester II

Field of Specialization Course III: (3.7) Insurance Management

Credits : 6

Hours : 90

Learning Objectives:

- LO1:** To Enlighten the research students about the fundamental principles governing insurance, capable of applied research
- LO2:** To enable the scholars to understand the insurance legislations in India
- LO3:** To Sensitize the scholars to understand the Insurance Regulatory and Development Authority of India so suited for academic research

Course Outcomes:

After the successful completion of the course, the scholars will be able to:

- CO1.** Expertise and study the various types of insurance and their present market scenario for applied research
- CO2.** Examine the legal framework of insurance industry suitable for research
- CO3.** Study the Indian Insurance Act and its implications and impact on people
- CO4.** Assess the role of IRDA in Insurance management so necessary for research.
- CO5.** Develop the constructs and scales for research in Insurance and application of relevant research tools.

Unit I: Introduction

Meaning – Nature – Purpose – Need – Principles of Insurance – Types of Insurance – Terminology – New Insurance Product – Present State of Insurance Industry in India.

Unit II: Legal Framework

Essentials of General Contract (Section 10) of Indian Contract Act, 1872 – Essential Features of Insurance Contracts – Salient Features of Insurance Act, 1938, LIC Act, 1956, GIC Act, 1972, IRDA Act, 1999, Agency Law and Consumer Protection Act, 1986.

Unit III: Indian Insurance Act, 1949

Basic Terms – Registration – Capital Requirement – Deposits – Accounts and Audit – Registers and Returns – Investments – Social and Rural Insurance – Management Expenses – Assignment and Nomination – Licensing – Agent Commission – Rebate and Bonus – Tariff Advisory Committee – Surveyors – Reinsurance – Surrender – Public Grievances – Obligations of Insurer.

Unit IV: IRDA

Introduction – Objectives – Powers – Duties – Functions – Advisory Committee – Central Government Powers – Deposit – Advertising Disclosures – Inspections and Investigations – Surplus Distribution – Code of Conduct of Agents.

Unit V: Tools and Scales as Applied to Insurance Research

Need for Scaling– Methods – Measurement of Institutional Behaviour Socio-metric Scales – Scaling Techniques - Procedure for Contributions. Statistical Measures and Their Application to Insurance Research Problems – Measures of Central Tendency and Variability – Correlation analysis – Testing of Hypothesis – Z Test – T Test – Chi-square Test and ANOVA – Non Parametric Statistics in Data Analysis – Factor Analysis- Blooms Taxonomy as related to Commerce Education.

Text Books:

1. Kothari C.R 2016 Research Methodology (Methods and Techniques) New Age International Publications, New Delhi.
2. Panda Chanashyam. 2015 Principles and Practice of Insurance, Kalyani Pub., Chennai, 2010.
3. Mishra C. Insurance, S.Chand and Co., New Delhi.
4. Murthy A. 2015 Principles and Practice of Insurance, Margham Publications, Chennai.

Supplementary Readings:

1. Katayal, Rakesh, Inderjit Singh and Aroras. 2012 Insurance, Kalyani Pub., Chennai.
2. LaxmiNarin. 2012 Principles of Insurance, S.Chand and Co., New Delhi.
3. Julia Holyoake and Welpers Bill William. 2013 Insurance, PHI, New Delhi.

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	L	L	L	L	S	M	L	S	L	M	M	M	M	M	M	S	S	S
CO2	L	M	M	M	S	M	M	S	M	M	M	M	M	M	M	M	M	S
CO3	L	M	M	M	S	M	M	S	M	M	M	M	M	M	M	M	M	S
CO4	L	M	M	M	S	M	M	S	M	M	M	M	M	M	M	M	M	S
CO5	S	M	M	M	S	S	M	S	L	S	S	S	S	M	M	S	M	S

* **L** – Low, **M** - Medium, **S** - Strong

Semester II

Field of Specialization Course III: (3.8) Technology Banking

Credits : 6

Hours : 90

Learning Objectives:

- LO1:** To acquaint the research students with the essential knowledge of financial institutions and services suitable for academic research.
- LO2:** To enable the scholars to understand the Banking Sector reforms in India worth for research
- LO3:** To impart the scholars to understand the new concepts of digital banking so suited for research today.

Course Outcomes:

After the successful completion of the course, the scholars will be able to:

- CO1.** Study and review the Banking Industry and its current developments so necessary for research
- CO2.** Examine and identify the researchable aspects related to Reforms in banking industry and effects of Demonetisation in India.
- CO3.** Critically evaluate the lending aspects of Banking industry in India and abroad
- CO4.** Explore and study the researchable aspects in Digital banking in India
- CO5.** Develop the constructs and scales for research in digital banking and application of relevant research tools.

Unit I: Financial Institutions and Services

Classification of Banking Industry – Reserve Bank of India – Commercial Banks – Development Banks – NABARD-Regional rural banks- Cooperative Banks – Specialized Banking institutions – Structures – Workings – Merger and Acquisition – Current scenario of Retail Banking Services in India.

Unit II: Banking Sector Reforms

Prudential Norms – Prudential Accounting – Norms for Banks – Board for Financial Supervision (BFS) – Non- performing Assets- Income recognitions policy- Asset Classification guidelines for classification of assets — Provisioning Norms – Securitization – Capital Adequacy Norms – Banking Ombudsman Scheme.

Demonetization – History of Demonetization in India-Meaning-Definition-Background-Objectives-Advantages and Disadvantages. Demonetization – Black money – fake money- Digital financial transactions-cash less economy – Remonetization- The Role of RBI in demonetization and Remonetization-Role of National Payment Corporation of India

Unit III: Lending Principles

Liquidity – Profitability – Safety Issues – Diversification of Risk – Retail Lending – Need – Types – Personal Loan – Housing Loan –Consumer Durables Loan – Auto Loans – Priority Sectors Lending- risks in lending

Unit IV: Technology in Banking

Computerisation in Banks – Core Banking solutions – Electronic Banking – Electronic Products – Electronic Funds Transfer Systems (EFTS) – Real Time Gross Settlement (RTGS) – Impact of Technology on Banks – Role and uses of Technology up gradation - Global Developments in Banking Technology. Green Banking- objectives- Significance

Rupay- Rupay Secure- IMPS – National Unified USSD Platform (USSD)-National Automated Clearing House (NACH)- Aadhaar Enabled payment System (AePS-KYC-

MICR Vs CTS- Comparison –National Financial Switch (NFS) - RTGS,NEFT,UPI,CCIL- National Payment Corporation – Forex Settlements, Securities Settlement- Innovative Banking Payment System

Unit V: Tools and Scales as Applied to Banking Technology Research

Need for Scaling– Methods – Measurement of Institutional Behaviour- scaling technique- Socio-metric Scaling Techniques – Procedure for Contributions. Statistical Measures and Their Application to Banking - Research Problems – Measures of Central Tendency and Variability – Correlation analysis – Testing of Hypothesis – Z Test – T Test – Chi-square Test and ANOVA – Non Parametric Statistics in Data Analysis – Factor Analysis - Blooms Taxonomy as related to Commerce Education.

Text Books:

1. Kothari C.R 2016 Research Methodology (Methods and Techniques) New Age International Publications, New Delhi.
2. Agarwal. H. C, 2015 Banking Law and Practice, Awan Publication, Agra.
3. Vashney. P. N, 2015 Banking Law and Practice, S. Chand and Co., New Delhi.
4. Sundharam and Varshney, 2014 Banking Theory Law and Practice, Sultan Chand and Sons, New Delhi.
5. Natarajan. S. and Parameswaran. R, 2012 Indian Banking, S. Chand and Company Ltd., New Delhi.

Supplementary Readings:

1. Shekar and Sekar, 2010 Banking Theory and Practice, Vikas Publication House, New Delhi.
2. Sayers. R. S, 2011 Modern Banking, Oxford University Press, New Delhi.
3. Gordon and Natarajan,2012 Banking Theory Law and Practice, Himalaya Publications, New Delhi.
4. Muraleedharan, D. 2013 Modern Banking – Theory and Practice, PHI Learning Private Limited, New Delhi.

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	S	M	M	S	S	L	L	S	M	L	L	L	S	M	M	S	S	S
CO2	S	M	S	M	S	M	L	M	L	L	S	S	S	S	S	M	M	S
CO3	M	L	L	L	S	L	L	S	L	S	S	S	S	S	M	S	M	S
CO4	S	M	S	M	S	M	L	M	L	L	S	S	S	S	S	M	M	S
CO5	S	M	M	M	S	S	M	S	L	S	S	S	S	M	M	S	M	S

* L – Low, M - Medium, S – Strong

Semester II

Field of Specialization Course III: (3.9) Financial Management

Credits : 6
Hours : 90

Learning Objectives:

- LO1:** To impart the knowledge to research scholars to understand the significance and application of cost of capital and capital structure theories as suitable for academic research
- LO2:** To enable the research scholars to gain expert knowledge of dividend policy and working capital management
- LO3:** To impart the knowledge to research scholars to understand the financial statement analysis and using various types of ratios relevant to research.

Course Outcomes:

After the successful completion of the course, the scholars will be able to:

- CO1.** Explore the researchable aspects of Cost of Capital and Capital Budgeting decisions so suited to academic research.
- CO2.** Study and do research in the capital structure and dividend decision areas relevant to chosen field of study based on primary and secondary data.
- CO3.** Evaluate the working capital management relevant to field research
- CO4.** Application and analysis the financial statements and using ratios based on secondary data.
- CO5.** Develop the constructs and scales for managerial finance and application of relevant research tools.

Unit I: Cost of Capital and Capital Budgeting Decisions

Cost of capital – Meaning and Importance – Cost of debt preference equity and retained earnings – weighted average cost of capital – Capital budgeting – Techniques – ROI , Payback period and discounted cash flow - Risk Analysis to Capital Budgeting, Sensitivity Analysis – Scenario Analysis – Break-even Analysis- Simulation Analysis, Decision Tree Analysis – Corporate Risk Analysis – Managing Risk – Project Selection Under Risk- Risk Analysis in Practice

Unit II: Capital Structure and Dividend Decision

Financial leverage – measures – EBIT, EPS Analysis – Operating leverage – business and operating risks – Theories of capital structure – Net income approach – Net operating income Approach – MM Hypothesis – Determinants of capital structure – Leasing – Nature & Types of Leasing – Advantages and Disadvantages of leasing – Financial evaluation of leasing, Dividend Theories – Walter's model – Gordon and MM's models – Dividend policy – forms of Dividend – Determinants of dividend policy.

Unit III: Working Capital Management

Management of working capital – concept – importance – Determinants and computation of working capital – Management of cash, inventory and receivables – Regulations of Bank credit to industry

Unit IV: Financial Statement Analysis and Miscellaneous

Nature of Financial Statement – Methods of Financial Statement analysis – Accounting ratios, types of ratios, their significance, uses and limitations – Fund Flow Analysis – Cash Flow analysis – Practical application of managerial techniques in decision making – Venture capital funds – Mergers and acquisitions – Mutual Funds – Factoring – Measurement and risk and returns – Securities and portfolios

Unit V: Tools and Scales as Applied to Financial Management Research

Need for scaling – methods of measurement of Institutional behaviour – Scaling Techniques -Socio metric scales – procedure for constructions – Statistical measures and their applications to financial management research problems – Measures of central tendency and variability – Correlation analysis – Testing of hypothesis – Z test – t test – Chi-square test and ANOVA – Non parametric statistics in Data analysis – Factor Analysis- Blooms Taxonomy as related to Commerce Education.

Text Books:

1. Prasanna Chandra, 2012 'Financial Management', Tata McGraw Hill Publishing Company Ltd. New Delhi
2. Maheswari, S.N 2014 Financial Management, Sultan Chand Ltd, New Delhi
3. Gitman L.J and Manickam. M, 2015 Principles of Managerial Finance, Pearson Education New Delhi
4. Pandey. I.M. 2015'Financial Management', Vikas Publishing House (P) Ltd. New Delhi

Supplementary Readings:

1. Khan and Jain, 2014 'Financial Management', Tata McGraw Hill Publishing Company Ltd
2. James C Van Horne, 2012 'Financial Management and Policy '.
3. S.P.Gupta, 2014 Statistical Methods, Sultan Chand Publication, New Delhi
4. Kothari C.R, 2016 Research Methodology Methods and Techniques, New Age International Publications, New Delhi.

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	S	M	S	M	S	M	L	M	L	L	S	S	S	S	S	M	M	S
CO2	S	L	S	S	S	S	L	S	M	L	L	L	S	S	S	S	S	S
CO3	M	L	L	L	S	M	L	S	M	L	L	L	S	S	S	L	M	S
CO4	S	L	S	S	S	S	M	M	M	L	L	L	M	M	L	M	M	S
CO5	S	M	M	M	S	S	M	S	L	S	S	S	S	M	M	S	M	S

* L – Low, M - Medium, S - Strong

SUGGESTED MOOC COURSES:

1. Finance for Everyone: Debt, Created by: McMaster University, Delivered by: Coursera, Taught by: Arshad Ahamed.
2. *Financial Engineering and Risk Management Part I (Coursera)*, Created by: Columbia University, Delivered by: Coursera, Taught by: Garud Iyengar and Martin Haugh.

3. *Corporate Financial Decision-Making for Value Creation* (Coursera), Created by: University of Melbourne, Delivered by: Coursera, Taught by: Paul Kofman Sean Pinder.
4. Financial Management, Created by Vanitha Tripathi, Delhi University. Swayam

Semester II

Field of Specialization Course III: (3.10) Financial Markets and Services

Credits : 6

Hours : 90

Learning Objectives:

- LO1:** To impart the knowledge to the research scholars to understand the significance of Money market and financial intermediaries as applicable for academic research
- LO2:** To enable the scholars to gain expert knowledge of new issue market and secondary markets so suited for field studies by research.
- LO3:** To enable the scholars to understand the financial services so necessary to research about.

Course Outcomes:

After the successful completion of the course, the scholars will be able to:

- CO1.** Critically examine the functioning of money markets by academic research
- CO2.** Evaluate and do research on Financial intermediaries based on primary and secondary data.
- CO3.** Explore and study the researchable aspects of New Issue market and Secondary markets
- CO4.** Investigate and identify the research aspects of various financial services so necessary for field level studies in India.
- CO5.** Develop the constructs and scales for research in financial markets and services and application of relevant research tools.

Unit I: Money Market

Money Market - Call Money Market - Treasury Bills Market -Commercial Bills Market - Markets for Commercial Course and Certificates of Deposits - The Discount Market - Market for Financial Guarantee - Government (Gilt-edged) Securities Market.

Unit II: Financial Intermediaries

Non Banking Financial Intermediaries –Investment Companies –Hire Purchase Finance –Lease Finance – Housing Finance – Mutual Benefits Financial Companies – Venture Capital Funds - Small Savings and Provident Funds - Unit Trust of India and Mutual Funds

Unit III: New Issue Market and Secondary Market:

New Issue Market – Meaning and Advantages– General Guidelines for New Issue – Methods of Floating – Players – Recent Trends. Secondary Market: Stock Exchanges - Functions –NSC, OTCEI, NASDAQ - Market indexes - Recent Developments – NSDL - Role of Securities and Exchange Board of India – Reforms in Secondary Market – Efficient Market Theory.

Unit IV: Financial Services

Merchant Banking – Definition, Origin of Merchant Banking – Merchant Banking in India - Merchant Banks and Commercial Banks – Services of Merchant Bankers – Qualities required for Merchant Bankers – Guidelines – Market Making Process – Progress, Problems and Scope of Merchant Banking in India. Factoring– Meaning, Functions, Types, Cost and Benefit of Factoring – Factoring in India and Abroad - Credit Rating - Mechanism, Role of CRISI - ICRA Limited and CIBIL.

Unit V: Tools and Scales as Applied to Financial Market and Financial Services Research

Need for scaling – methods-Measurement of institutional behavior – Scaling Techniques- Socio Metric Scales – procedure for constructions. Statistical measures and their applications to financial market research problems – Measures of central tendency and variability – Correlation analysis - Testing of hypothesis – Z test- t Test – Chi-square test and ANOVA – Non parametric statistics in Data analysis– Factor Analysis- Blooms Taxonomy as related to Commerce Education.

Text Books:

1. Bhole L.M 2016 Financial Institutions and Markets, , Tata McGraw Hill Publishing Company Limited, New Delhi.
2. Nalini PravaTripathy 2015 Financial Instruments and Services, , Prentice Hall of India, New Delhi.
3. Gurusamy S 2015 Financial Markets and Institutions, S. Vijay Nicole Imprints (P) Ltd Chennai
4. Gordon and Natarajan, 2011 Financial Markets and Services, Himalaya Publishing House. Mumbai

Supplementary Readings:

1. Jeff Madura, 2011 Financial Markets and Institutions, 5th Ed., South-Western College Publishing.
2. Khan, M.Y, 2012 Financial Services, Tata McGraw Hill. Publishing Company Limited, New Delhi.
3. Gupta S.P 2012 Statistical Methods, Sultan Chand Publication, New Delhi.
4. Kothari C.R2016 Research Methodology Methods and Techniques, New Age International Publications, New Delhi.

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	M	M	L	S	S	M	M	M	S	L	L	L	S	M	M	S	M	S
CO2	S	M	M	S	S	M	L	S	M	L	L	L	M	M	M	S	S	S
CO3	S	S	M	S	S	M	L	S	M	L	L	L	S	S	M	M	M	S
CO4	S	S	M	S	S	M	L	S	M	L	L	L	S	S	M	M	M	S
CO5	S	M	M	M	S	S	M	S	L	S	S	S	S	M	M	S	M	S

* L – Low, M - Medium, S - Strong

SUGGESTED MOOC COURSES:

1. MOOC Material: **Financial Markets**, Created by: Yale University, Taught by: Robert Shiller.
2. MOOC Material: **Global Financial Markets and Instruments**, Created by: Rice University, Taught by: Arzu Ozoguz.
3. MOOC Material: **Finance for Everyone: Markets**, Created by: McMaster University, elivered by: Coursera, Taught by: Arshad Ahamed.

Semester II

Field of Specialization Course III: (3.11) International Business

Credits : 6

Hours : 90

Learning Objectives:

- LO1:** To impart the knowledge to the scholars to understand International Business for academic research
- LO2:** To enable the scholars to gain expert knowledge of theory of trade and Investment so suited for survey based research.
- LO3:** To enable the scholars to understand the Global Business and International Marketing environment related to research in Commerce.

Course Outcomes:

After the successful completion of the course, the scholars will be able to:

- CO1.** Comprehend the nature and functioning of international business so suited for research
- CO2.** Examine the various theories of trade and investment and its application in international business necessary for academic research
- CO3.** Explore and identify the researchable areas on functioning of Global business relevant to academic research in commerce
- CO4.** Evaluate and do research on Investment, marketing and taxation aspects of international business so warranting research in chosen areas.
- CO5.** Develop the constructs and scales for research in international business and services and application of relevant research tools.

Unit I : Basis of International Business

Globalisation and its drivers; every modes and development strategies;
Evaluation of different modes and selection of an energy strategy

Unit II : Theory of Trade and Investment

Trade Theories-Mercantilism-Theory of absolute advantage; The Theory of comparative advantage; Factor Proportions Theory; Product Life Cycle Theory: New Trade Theory; Theory of National complete advantage – Investment Theories-Relationship between export and FDI-OLI Theory and LLL Theory.

Unit III: Global Business

Foreign Exchange Market; International Monetary System; Exchange rate arrangements; International money and Capital market ; International banking.

Unit IV : International Marketing and International Taxation and investment Issues

International Marketing : An Overview ; EPRG frame work and its relevance to assessment of a firms 'involvement with international markets- Internationalisation process of business firms; Theories and Models; psychic distance, international strategy formulation and firm performance; consumer ethnocentrism and country – of- origin effects. International double taxation; International tax evasion and avoidance- Transfer Pricing, Tax heavens, treaty shopping: Methods to alleviate international double taxation; double taxation Avoidance Agreement (DTAAS) Bilateral Investment Treaties

Unit V: Tools and Scales as Applied to International Business

Need for scaling – Methods-Measurement of institutional behavior – Socio-metric scaling Techniques – procedure for constructions. Statistical measures and their applications to International business research problems – Measures of central tendency and variability – Correlation analysis - Testing of hypothesis – Z test- t Test – Chi-square test and ANOVA – Non parametric statistics in Data analysis– Factor Analysis- Blooms Taxonomy as related to Commerce Education.

Text Books:

1. Rajwada, A.V 2012 Foreign Exchange and International Finance, Tata McGraw Hill Publish Co New Delhi
2. Khurama PK 2014 Export Management. Galgotia Publishing Company, New Delhi
3. Rudder Dutt and Sundaram KPM 2016 Indian Economy S.Chand and Co Ltd, New Delhi

Supplementary Readings:

1. Agarwal and Verma 2014 International Trade, TBH Publishers, Chennai
2. Mithani D.M 2015 An Introduction to International Economics, Himalaya Publishing House, Mumbai
3. Jhngan, ML 2014 International Economics, Konark Publications, New Delhi
4. Sharma V International Financial Management, Prentice Hall of India Ltd, New Delhi
5. Jeevanandham C, 2014 Foreign Exchange and Risk Management, Sultan Chand and Sons, New Delhi
6. .Kothari C.R 2010, Research Methodology Methods and Techniques, New Age International Publications, New Delhi

Outcome Mapping

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6
CO1	M	M	L	S	S	L	L	M	S	L	L	L	S	S	S	M	M	S
CO2	M	M	L	S	S	M	L	S	M	L	L	L	S	S	S	M	M	S
CO3	S	S	M	S	S	M	M	S	S	S	S	S	S	S	M	M	S	S
CO4	S	S	M	S	S	M	M	S	S	S	S	S	S	S	M	M	S	S
CO5	S	M	M	M	S	S	M	S	L	S	S	S	S	M	M	S	M	S

* L – Low, M - Medium, S - Strong

SUGGESTED MOOC COURSES:

1. MOOC Material: **Quantitative Foundation for International Business (Coursera)**, Created by: University of London, Delivered by: Coursera, Taught by: George Kapetanios.
2. MOOC Material: **International Finance**, Created by: Marginal Revolution University, Delivered by: MR University, Taught by: Alex Tabarrok and Tyler Co