Central University of Punjab

Ph.D. Agribusiness

Batch - 2023

Department of Applied Agriculture

Graduate attributes

The programme will enable learners to adopt themselves as research and development professionals/experts (Agribusiness Policy Advisors, Industry Experts *etc.*) in the field of agribusiness for meeting requirements of industry, regulatory bodies and other organizations at various levels (regional, national and international).

Ph.D. Program in Agribusiness
Course Structure of the Program

Course Code	Course Title	L	T	P	Total Credits
ABM.703	Research Methodology and Computer Applications	4	0	0	4
ABM.751	Research and Publication Ethics	2	0	0	2
ABM.704	Agricultural Input and Output Marketing	4	0	0	4
ABM.707	Seminar	2	0	0	2
ABM.752	Teaching Assistantship	0	0	2	1
UNI.753	Curriculum, Pedagogy and Evaluation (to be offered by Department of Education)	1	0	0	1
	Total	13	0	2	**14**

L: Lectures T: Tutorial P: Practical

L	T	P	Credits
4	0	0	4

Course Code: ABM.703
Course Title: Research Methodology and Computer Applications
Total Hours – 60

Course Learning Outcomes (CLO):
After completion of the course, scholars shall be able to:
CLO1: Illustrate the basic good practices to be followed in research.
CLO2: Formulate the principles of ethics in research which will help them to understand the set of conduct norms applied in agribusiness.
CLO3: Interpret the ethical issues involved in agriculture and allied research.
CLO4: Judge the misconduct, fraud and plagiarism in research.
CLO5: Utilize the computer and statistical tools for analyzing and interpreting the data.

Unit/ Hours	Contents	Mapping with CLO
I **15 Hours**	**Introduction to Research**: Meaning, Objectives, types and significance of Research- Research Methods vs. Research Methodology- Business Research: Objectives and Characteristics, Scope, Types and Significance- Qualities of Good Researcher; Research Ethics and Plagiarism. **Research Process:** Formulation and Selection of Research Problem- Literature Review- Methods and Reporting, Identifying Variables, Constructing Hypotheses; Conceptualizing a Research Design- Meaning and Types of Research Design. **Sampling Design:** Sampling Techniques- Probability and Non-Probability, Sample Size and its Determination, Qualities of a good Sample. **Learning Activities:** *Peer discussion, Classroom assignments.*	**CLO1** **CLO2** **CLO3** **CLO4**
II **15 Hours**	**Collection and Presentation of Data:** Constructing an Instrument for Data Collection- Methods for Data Collection. Validity and Reliability of Research	**CLO1** **CLO2** **CLO3** **CLO4**

	Instruments- Ethical issues in Data Collection; Processing and Displaying Data. **Data Analysis and Interpretation:** Introduction to Qualitative, Quantitative and Mixed methods, Quantitative Methods- Univariate, Bivariate and Multivariate, Qualitative Methods- Grounded Theory and Triangulations, Mixed Methods- Convergent Parallel, Explanatory Sequential, Exploratory Sequential and Transformative. **Testing of Hypotheses:** Parametric and Non-Parametric Test, Errors and Level of Significance. **Technical Writing:** Scientific writing, writing synopsis, Research paper, Poster preparation, oral presentations and Dissertations. Reference Management using various softwares such as Mendeley, Endnote, reference manager, Refworks, etc. Communication skills: defining communication; type of communication; techniques of communication, etc. **Learning Activities:** Field survey, *Exercise on data analysis, Research article reviews, Group discussion.*	
III **15 Hours**	**Computer Applications:** Microsoft Office Application, Literature, Reference and Citation Management. **Use of MS Word in Business Research**: Creation of Tables, Diagrams, and Graphs, Creation of Equations, Preparing Table of Contents, Endnote, Footnote, Bibliography, Auto-Spelling and Grammar check, Use of Thesaurus & Translation facilities, Use of Power Point Presentations in Business Research. **Use of MS Excel in Business Research:** Data Tabulation & Processing- Data Validation, Creation of Tables, Diagrams, Use of Mathematical, Statistical, Functional and Logical formula for computations, Use of analysis. **Learning Activities:** *Exercise on MS Word, MS Excel, Assignments.*	**CLO5**

IV 15 Hours	**Introduction to Software Packages for Business Research SPSS:** General Orientation to Research in Business Management, Entering Describing and Obtaining Data, Statistically Analysing Data: Parametric and Non-Parametric, Survey Methods for research in Business Management and Reporting and Presenting Research. **Learning Activities:** *Class presentations and Seminar.*	CLO5

Suggested Reading:
1. Gupta, S. (2010). *Research Methodology and Statistical Techniques.* Deep & Deep Publications (P) Limited, New Delhi.
2. Kothari, C.R., Garg, G. (2019). *Research Methodology: Methods and Techniques.* 4th Edition, New Age International (p) Limited. New Delhi.
3. Sahay, Vinaya and Pradumna Singh (2009). *Encyclopedia of Research Methodology in Life Sciences.* Anmol Publications. New Delhi.
4. Kauda J. (2012). *Research Methodology: A Project Guide for University Students.* Samfunds literature Publications.
5. Dharmapalan B. (2012). *Scientific Research Methodology.* Narosa Publishing
6. Adams J., et al, Research Methods for Business and Social Science Research, Sage Publishing, (2/e), 2014.
7. Bajpai N., Business Research Methods, Pearson, (2/e), 2017.
8. Kumar R., Research Methodology: A step by step guide for Beginners, Sage Publishing, (4/e), 2014.
9. Mishra P., Business Research Methods, Oxford University Press, (1/e), 2014.
10. Phanse S.S., Research Methodology: Logic, Methods and Cases, Oxford University Press, (1/e), 2016.

Modes of transaction:
- Classroom lecture
- Problem solving approach
- Group discussion
- Self-learning
- Peer learning
- Lecture-cum-demonstration
- Brainstorming
- Case study discussion and analysis

Tools used:
MS Office- Word, Excel, PPT, SPSS, Mendeley, Google drive, Video, Google meet, Google forms/docs, WhatsApp, e-content.

L	T	P	Credits
2	0	0	2

Course Code: ABM.751
Course Title: Research and Publication Ethics
Total Hours – 30

Course Learning Outcomes (CLO):
After completion of the course, scholars shall be able to:
CLO1: Familiarize with the ethics of research.
CLO2: Illustrate the good practices to be followed in research and publication.
CLO3: Judge the misconduct, fraud and plagiarism in research.
CLO4: Utilize various online resources and software to analyze their research output.

Unit/ Hours	Content	Mapping with CLO
I 3 hours	**Philosophy and Ethics** • Introduction to Philosophy: definition, nature and scope, content, branches • Ethics: definition, moral philosophy, nature of moral judgements and reactions	**CLO1**
II 5 hours	**Scientific Conduct** • Ethics with respect to science and research • Intellectual honesty and research integrity • Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP) • Redundant publications: duplicate and overlapping publications, salami slicing • Selective reporting and misrepresentation of data	**CLO1 & CLO2**
III 7 hours	**Publication Ethics** Publication ethics: definition, introduction and importance • Best practices/ standards setting initiatives and guidelines: COPE, WAME, etc. • Conflicts of interest • Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice versa, types	**CLO2 & CLO3**

		● Violation of publication ethics, authorship and contributor ship ● Identification of publication misconduct, complaints and appeals ● Predatory publishers and journals	
IV **4 hours**	**Open Access publishing** ● Open access publications and initiatives ● SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies ● Software tool to identify predatory publication developed by SPPU ● Journal finder/journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer, Journal Suggester etc.		**CLO2**
V **4 hours**	**Publication Misconduct** ● Group Discussions: Subject-specific ethical issues, FFP, authorship; conflicts of interest; complaints and appeals: examples and fraud from India and abroad ● Software tools: Use of plagiarism software like Turnitin, Urkund and other open source software tools		**CLO2 &** **CLO3**
VI **7 hours**	**Databases and Research Metrics** ● Databases: Indexing databases; Citation database: Web of Science, Scopus etc. ● Research Metrics: Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score; Metrics: h-index, g-index, i10 index, almetrics		**CLO4**

L	T	P	Credits
4	**0**	**0**	**4**

Course Code: ABM.704
Course Title: Agricultural Input and Output Marketing
Total Hours - 60

Course Learning Outcomes (CLO):
After completion of the course, the scholars shall be able to:
CLO1: Assess the agri input and output sectors and their marketing.

CLO2: Explain the importance of agri inputs and output sectors, their marketing to support the agri industry by meeting various inputs needs to different organisations and responding to rapid changes.

CLO3: Classify the different types of agriculture input and their use.

CLO4: Analyse the role of the government, their policies and other agencies in this sector.

CLO5: Categorize the various companies which are functioning in the agri-input sector.

Unit/ Hours	Contents	Mapping with CLO
I **15 Hours**	Agriculture input and output marketing environment-Current status, trends, market structure, infrastructure, competition; Government intervention in agricultural inputs and outputs marketing. **Learning Activities:** *Peer discussion, Classroom assignments, Research papers and reviews published in peer-reviewed international journals in the above areas.*	**CLO1** **CLO2**
II **15 Hours**	Buyers/users behaviour; Market Segmentation; Product and Pricing; Promotion and advancement in promotional strategies. **Learning Activities:** Field survey, *Research papers and reviews published in peer-reviewed international journals in the above areas.*	**CLO2** **CLO3** **CLO4**
III **15 Hours**	Marketing Channels for different agri inputs and outputs; Evaluation of marketing costs and efficiencies. **Learning Activities:** *Research papers and reviews published in peer-reviewed international journals in the above areas.*	**CLO2** **CLO3** **CLO4**
IV **15 Hours**	WTO and Indian Agriculture; Case Studies-Competitive marketing strategies and advancements in agricultural marketing.	**CLO4** **CLO5**

| | **Learning Activities:** *Research papers and reviews published in peer-reviewed international journals in the above areas.* | |

Suggested Readings:

1. Acharya, S. S. and Agarwal, N. L., 2011. Agricultural Marketing in India. 4th Ed. Oxford and IBH.
2. Broadway A. C. and Broadway, A. A., 2003. A Text Book of Agri-Business Management. Kalyani.
3. Pingali, V. and Kaundinya, R., 2014. Agri-input marketing in India, SAGE.
4. Singh Sukhpal, 2004, Rural Marketing- Focus on Agricultural Inputs. Vikas Publ. House.
5. Singh, A. K. and Pandey, S., 2005. Rural Marketing. New Age.

Modes of transaction:
- Classroom lecture
- Problem solving approach
- Group discussion
- Learning centric activity
- Self-learning
- Peer learning
- Lecture-cum-demonstration
- Brainstorming
- Case study discussion and analysis

Tools used:
MS Office- Word, Excel, PPT, SPSS, Mendeley, Google drive, Video, Google meet, Google forms/docs, WhatsApp, e-content.

L	**T**	**P**	**Credits**
2	**0**	**0**	**2**

Course Code: ABM.707
Course Title: Seminar

Course Learning Outcomes (CLO):
After completion of the course, the scholars shall be able to:
CLO1: Survey literature, write clear and concise technical reports and communicate concise technical presentation based on constructive criticism effectively.

Transactional Modes:

Mode of transaction shall be Lecture-cum-demonstration, dialogue/discussion, etc.

Evaluation criteria:

Seminars shall be evaluated as detailed below:

Continuous Assessment

Innovation in idea	:	20 marks
Interaction with Supervisor	:	20 marks
Attendance	:	10 marks

Assessment of end term evaluation

Report	:	15 marks
Content	:	10 marks
Presentation skills	:	15 marks
Responses to queries	:	10 marks

L	T	P	Credits
0	0	2	1

Course Code: ABM.752
Course Title: Teaching Assistantship
Total Hours: 30

Course Learning Outcomes (CLO):

At the end of this skill development course, the scholars shall be able to

CLO1: familiarize themselves with the pedagogical practices of effective classroom delivery and knowledge evaluation system.

CLO2: manage large and small classes using appropriate pedagogical techniques for different types of content.

Activities and Evaluation:

- The scholars shall attend Master degree classes of his/her supervisor to observe the various transaction modes that the supervisor follows in the classroom delivery or transaction process one period per week.

- The scholars shall be assigned one period per week under the direct supervision of his/her supervisor to teach the Master degree students adopting appropriate teaching strategy(s).

- The scholars shall be involved in examination and evaluation system of the Master degree students such as preparation of questions, conduct of examination and preparation of results under the direction of the supervisor.

- At the end of the semester, the supervisor shall conduct an examination of teaching skills learned by the scholar as per the following **evaluation criteria**:

  - The scholars shall be given a topic relevant to the Master degree course of the current semester as his/her specialization to prepare lessons and deliver in the classroom before the master degree students for one hour (45 minutes teaching + 15 minutes interaction).

  - The scholars shall be evaluated for a total of 50 marks comprising *content knowledge* (10 marks), *explanation and demonstration skills* (10 marks), *communication skills* (10 marks), *teaching techniques employed* (10 marks), and classroom interactions (10).

L	T	P	Credits
1	0	0	1

Course Code: UNI.753
Course Title: Curriculum, Pedagogy and Evaluation
Total Hours: 15

Course Learning Outcomes (CLO):
After completion of the course, the scholars shall be able to:
CLO1: analyze the principles and bases of curriculum design and development
CLO2: examine the processes involved in curriculum development
CLO3: develop the skills of adopting innovative pedagogies and conducting students' assessment
CLO4: develop curriculum of a specific course/programme

Unit/ Hours	Content	Mapping with CLO
I **4 hours**	**Bases and Principles of Curriculum** 1. Curriculum: Concept and Principles of curriculum development, Foundations of Curriculum Development.	**CLO1**

	2. Types of Curriculum Designs- Subject centered, learner centered, experience centered and core curriculum. Designing local, national, regional and global specific curriculum. Choice Based Credit System and its implementation.	
II **4 hours**	**Curriculum Development** 1. Process of Curriculum Development: Formulation of graduate attributes, course/learning outcomes, content selection, organization of content and learning experiences, transaction process. 2. Comparison among Interdisciplinary, multidisciplinary and trans-disciplinary approaches to curriculum.	**CLO2**
III **3 hours**	**Curriculum and Pedagogy** 1. Conceptual understanding of Pedagogy. 2. Pedagogies: Peeragogy, Cybergogy and Heutagogy with special emphasis on Blended learning, Flipped learning, Dialogue, cooperative and collaborative learning. 3. Three e- techniques: Moodle, Edmodo, Google classroom.	**CLO3**
IV **4 hours**	**Learners' Assessment** 1. Assessment Preparation: Concept, purpose, and principles of preparing objective and subjective questions. 2. Conducting Assessment: Modes of conducting assessment – offline and online; use of ICT in conducting assessments. 3. Evaluation: Formative and Summative assessments, Outcome based assessment, and scoring criteria. **Learning Activities:** *Develop curriculum for a course/programme related to the research scholar's discipline.*	**CLO3** **CLO4**

Transaction Mode:

Lecture, dialogue, peer group discussion, workshop

Evaluation criteria:

There shall be an end term evaluation of the course for 50 marks for duration of 2 hours. The course coordinator shall conduct the evaluation.

Suggested Readings:

- Allyn, B., Beane, J. A., Conrad, E. P., & Samuel J. A., (1986). *Curriculum Planning and Development*. Boston: Allyn & Bacon.
- Brady, L. (1995). *Curriculum Development*. Prentice Hall: Delhi. National Council of Educational Research and Training.
- Deng, Z. (2007). Knowing the subject matter of science curriculum, *Journal of Curriculum Studies*, 39(5), 503-535. https://doi.org/10.1080/00220270701305362
- Gronlund, N. E. & Linn, R. L. (2003). *Measurement and Assessment in teaching*. Singapore: Pearson Education
- McNeil, J. D. (1990). *Curriculum: A Comprehensive Introduction*, London: Scott, Foreman/Little
- Nehru, R. S. S. (2015). *Principles of Curriculum*. New Delhi: APH Publishing Corporation.
- Oliva, P. F. (2001). *Developing the curriculum* (Fifth Ed.). New York, NY: Longman
- Stein, J. and Graham, C. (2014). *Essentials for Blended Learning: A Standards-Based Guide*. New York, NY: Routledge.

Web Resources:

- https://www.westernsydney.edu.au/__data/assets/pdf_file/0004/467095/Fundamentals_of_Blended_Learning.pdf
- https://www.uhd.edu/academics/university-college/centers-offices/teaching-learning-excellence/Pages/Principles-of-a-Flipped-Classroom.aspx
- http://leerwegdialoog.nl/wp-content/uploads/2018/06/180621-Article-The-Basic-Principles-of-Dialogue-by-Renate-van-der-Veen-and-Olga-Plokhooij.pdf