

Department of Agricultural Extension & Information System

Course Layout

SL. No.	Course Code and Title	Cr. Hrs.
A. Compulsory Courses		
1	AEIS 501: Agricultural Extension and Communication	3
2	AEIS 502: Agricultural Knowledge and Information System	3
3	AEIS 503: Technology Diffusion	3
4	AEIS 504: Extension Project Development and Management	3
5	AEIS 505: Group Dynamics and Leadership Development	3
6	AEIS 506: Research Methodology in Social Sciences	3
Total		18
B. Elective Courses 12		
7	AEIS 507: Statistics for Socio-Economic Research	3
8	AEIS 508: Agricultural Journalism	3
9	AEIS 509: Psychology of Human Behavior	3
10	AEIS 510: Non-government Organizations in Rural Development	3
11	AEIS 511: Gender Issue and Development	3
12	AEIS 512: GIS and Remote Sensing in Agriculture	3
13	AEIS 513: Adult Education and Rural Training	3
14	AEIS 514: Climate Change and Agriculture	3
15	AEIS 515: Extension Administration, Supervision and Management	3
16	AEIS 516: Communication Skills	3
17	AEIS 517: Community Development	3
18	AEIS 518: Planning, Monitoring and Evaluation of Extension Program	3
19	AEIS 519: Agricultural Environment, Development and Sustainability	3
20	AEIS 520: Development Communication	3
21	AEIS 521: ICTs for Development (ICT4D)	3
22	Related Course from other Departments	3
Minimum		12
C. Seminar Course		
23	AEIS 598	1
D. Thesis Research		
24	AEIS 599	16
Compulsory Courses		18
Elective Courses		12
Seminar Course		1
Thesis Research		16
Total		47

Curriculum Alignment / Skill Mapping

Curriculum must be aligned with program objectives, program learning outcome and intended learning outcomes through proper skill mapping.

Department of Agricultural Extension & Information System

Courses	Program Learning Outcome							
	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8
AEIS 501	x	x	x	x				x
AEIS 502	x	x	x	x				x
AEIS 503	x	x	x	x				x
AEIS 504	x	x	x	x				x
AEIS 505	x	x	x	x				x
AEIS 506	x	x	x	x				x
AEIS 507	x	x	x	x				x
AEIS 508	x	x	x	x				x
AEIS 509	x	x	x	x				x
AEIS 510	x	x	x	x				x
AEIS 511	x	x	x	x				x
AEIS 512	x	x	x	x				x
AEIS 513	x	x	x	x				x
AEIS 514	x	x	x	x				x
AEIS 515	x	x	x	x				x
AEIS 516	x	x	x	x				x
AEIS 517	x	x	x	x				x
AEIS 518	x	x	x	x				x
AEIS 519	x	x	x	x				x
AEIS 520	x	x	x	x				x
AEIS 521	x	x	x	x				x
AEIS 598						x	x	
AEIS 599					x	x	x	x

Course Code: AEIS 501 Course Title : Agricultural Extension and Communication (Compulsory)	Credit Hour: 03	Semester: July-December	
Rationale: This course is designed to provide knowledge on Agricultural Extension in Bangladesh context and extension communication for agricultural development.			
Course Outcomes: • Conceptualize Agricultural Extension in Bangladesh context. • Explain extension communication system. • Compare among different types of communication in real life situation. • Interpret the application of extension communication for agricultural development.			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Explain communication system and communication process, ▪ Interpret communication fidelity, ▪ Analyze extension communication feedback and its effects	Concept, nature and importance of agricultural communication. Models of communication and its elements-factors affecting fidelity. Feedback-importance and effects.	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Differentiate communication process and learning process, ▪ Generalize media of communication and their roles and functions ▪ Explain socio-psychological approach to mass, group and interpersonal communication,	Communication and learning. Media of communication-mass, group, inter-personal and traditional their types, roles and functions. Social psychological approach to mass and inter-personal communication.	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Distinguish publicity and propaganda, ▪ Explain impact of communication in social change, ▪ Point out the barriers of communication and possible salutary,	Farm information method-publicity, propaganda and education. Communication and social change. Barriers of communication-social, cultural and psychological. Communication	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

Construct communication strategy for agricultural development,	strategy for agricultural development.		
- Interpret significant researches in agricultural communication and their implications, - Explain organizational communication in agricultural development, - Point out the features of development communication. - Illustrate principles of rural journalism,	Significant researches in communication and their implications Organizational communication for agricultural development Basic features of development communication Principles of rural journalism.	Lecture Discussion Multimedia presentation Assignment	Quiz/MCQ Short answer Essay type answer Report
Evaluate/critically analysis latest advancement in agricultural extension and communication	Latest research findings and information regarding agricultural extension and communication.		

Reference Books:

1. C. Leeuwis and A. Van den Ban. 2004. Communication for Rural Innovation: Rethinking Agricultural Extension. Blackwell Science Ltd, London, UK.
2. G. L. Roy. 2006. Extension Communication and Management. Joy Prakashani. Calcutta, India.
3. J. C. Pearson and P. E. Nelson, 2010. Human Communication, McGraw Hill, Newyork, USA.
4. M. A. Kashem. 2004. Fundamentals of Extension Education. BAU. Mymensingh, Bangladesh.
5. M. H. Bhuiyan, M.A.M. Miah, M.G.R. Akanda and M.A. Bashir 2014. Agricultural Extension Education. G-Science Implementation and publication, Dhaka, Bangladesh.
6. O. P. Dahma, O.P. Bhatnagar, (2010), Education and Communication for Development, Oxford & Publishing Co. Pvt. Ltd. New Dehli, India.

Course Code: AEIS 502 Course Title : Agricultural Knowledge and Information System (Compulsory)	Credit Hour: 03	Semester: July-December	
Rationale: This course is designed to provide a thorough and informative perspective of Knowledge Management (KM) and its application in Agriculture.			
Course Outcomes: After completing the course, students will be able to • Describe the fundamental and principle of KM and its creation, acquisition, representation, dissemination, use and re-use, management and assessment. • Explain the core concepts, methods, techniques and tools for computer support of knowledge management (KM). • Demonstrate the ability to apply KM solutions to agricultural knowledge acquisition and dissemination. • Demonstrate the ability to use IT-based KM tools in agriculture. • Conduct theory-driven research in the field of Agricultural Knowledge Management.			
Intended Learning Outcomes (ILOs) The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
• Classify different types of knowledge, • Differentiate between data information & knowledge • Explain knowledge management processes	KM Foundation: concept, continuum of knowledge, knowledge classification, KM processes, KM solution	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
• Identify knowledge resources in organization • Distinguish knowledge based on their characteristics • Comprehend different KM cycles and their application	KM Cycles: Knowledge reservoirs, knowledge characteristics, KM cycles	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
• Interpret the knowledge spiral and conversion models • Apply KM principles in organizational setting • Identify requirements for developing KM in organization	KM Models: Knowledge spiral, KM conversion model, factors of successful KM in organization, KM architecture	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Distinguish different types of knowledge application systems ▪ Apply techniques for capturing of knowledge ▪ Articulate and use different types of knowledge sharing systems ▪ Articulate and use different data mining techniques for knowledge discovering	KM Impact: KM impact in organization, KM application, capture, sharing and discovery systems, data mining technique applications,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Determine key factors that determine the suitability of KM solutions ▪ Comprehend the impact of KM characteristics on KM processes ▪ Identify and describe emerging technologies used in KM practices ▪ Analyse the applicability of those technologies in agricultural knowledge management practice	Emergent KM applications: Contingency view of KM application, Effect of task characteristics on KM processes, Emergent KM applications,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Differentiate between spatial and attribute data ▪ Identify the areas of GIS application in agriculture	Introduction to GIS: Concept, Spatial & attribute data, Vector vs. Raster data, GIS applications in agriculture,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Collect data using GIS techniques ▪ Draw map using GIS tools	Spatial Data Collection & presentation: Basic function of GPS, Skills required for GPS application, Concept of Map, Data collection using map, Draw map using GIS	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Compare AKIS in Bangladesh and beyond ▪ Detect current challenges of implementation AKIS in Bangladesh agriculture	Comparative AKIS: AKIS in Bangladesh and other countries, Current challenges and future of AKIS,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Apply KM principles in real-world setting	Assignment on KM applications in agriculture	Assignment	Group presentation, Report.
<u>Reference Books:</u> 1. Becerra-Fernandez, I. and Sabherwal, R.2010. Knowledge Management: Systems and Processes. M.E. Sharpe 2. Kimiz, Dalkir .2005. Knowledge Management in Theory and Practice. Elsevier Ltd. 3. O, Huisman and A. De. Rolf. 2001. Principles of Geographic Information Systems: An introductory textbook. ITC, the Netherlands.			

Course Code: AEIS 503	Credit Hour: 03	Semester: Jan-June	
Course Title : Technology Diffusion (Compulsory)			
Rationale: The course is designed to provide the theories and techniques of diffusion of innovation in agriculture.			
Course Outcomes: • Describe technology and its diffusion process, • Explain principals and procedure of Research – Extension linkage mechanism, • Acquaint with opinion leader, diffusion network and change agent in agricultural extension.			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Describe and apply the procedure of technology diffusion in agricultural extension. ▪ Describe the adopter categories and client system in diffusion process. ▪ Compare different types of Research-extension link.	Concept of technology diffusion and technology generation • Diffusion process and Innovation-decision process • Models of technology diffusion process • Innovativeness and Adopter categories and generalizations about adopter categories • Measurement of adoption and Management development for farmers • Ecological factors in adoption: Client system constraints in technology transfer Program • The Rise of Diffusion Research Traditions • Converting Research into Practice • Significant Researches in the field of diffusion and adoption conducted in Bangladesh • Research-Extension-Linkage mechanism for technology diffusion; Role of PRA, RRA and	Lecture Discussion Multimedia presentation Assignment	Quiz/MCQ Short answer Essay type answer Report

	FFS in technology identification and dissemination		
▪ Explain the roles of opinion leadership in diffusion network. ▪ Prepare training model for development ideal leadership for agriculture development	Opinion Leadership and Diffusion networks • Models of Mass Communication flows • Heterophily - Homophily and the flow of communications • Measuring opinion leadership and Networks links • Characteristics of opinion leaders • Diffusion networks	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer Report
▪ Describe the basic functions of the change agent and their importance in technology diffusion. ▪ Explain the cause of failure of change agent	The change agent • Change agent as linkers; change agents' roles • Factors in change agent success • Homophily and change agent contact	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer Report
▪ Outline the gap analysis in technology transfer	Consequence of Innovation • Gap analysis in technology transfer • Group approach in transfer of technology Communication in innovation-decision process	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer Report
<u>Reference Books:</u> 1. E.M. Rogers. 2003. Diffusion of Innovations (5th Ed.). Free Press. NewYork. 2. G. L. Roy. 2006. Extension Communication and Management. Joy Prakashani. Calcutta, India. 3. M. H. Bhuiyan, M.A.M. Miah, M.G.R. Akanda and M.A. Bashar 2014. Agricultural ExtensionEducation. G-Science Implementation and publication, Dhaka, Bangladesh.			

Course Code: AEIS 504 Course Title: Extension Project Development and Management (Compulsory)	Credit Hour: 03	Semester: July-December	
Rationale: This course is designed to acquaint students with various stages of project cycle so that they can prepare development project and also gain necessary knowledge and skills of managing the project.			
Course Outcomes: - Describe key concepts of development, plan, policy, project and programme - Able to plan project from identifying and analyzing problem to developing logframe, activity schedule and resource schedule - Explain key concepts of monitoring, evaluation and managing results of development projects			
Intended Learning Outcomes (ILOs): The students will able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
- Explain key concepts of development, plan, policy, project and programme - Classify development projects - Compare between project planning and proposal writing - Summarize phases of logical framework approach of project planning - Explain need assessment - Classify different types of needs - Describe procedure of different methods of need assessment - Analyze stakeholders and summarize the findings in a matrix - Analyze the problem, objectives and strategies - Explain elements of logframe - Construct intervention logic from strategy analysis	Project Planning: a) Concept of project, programme, plan and policy; Classification of projects; Definition of project planning; Difference between project planning and proposal writing; Project planning approaches; Logical Framework Approach; Steps of project planning - Need assessment, Stakeholder, Problem, Objective, Strategy analysis, Logframe developing, Activity scheduling and Resource scheduling	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Assess importance of assumption by using a flow chart • Formulate important assumptions ▪ Develop logframe from identified problem			
▪ Mention stages of project cycle ▪ Identify potential projects and prepare project identification document (PID) or project concept paper (PCP) ▪ Explain project feasibility study ▪ Explain technical, financial soundness, management and organizational, environmental, social and political, and economic aspects of project appraisal ▪ Differentiate between financial and economic appraisal ▪ Explain shadow price and Opportunity cost ▪ Identify project costs and benefits ▪ Calculate Net Present Value (NPV), Benefit Cost Ratio (BCR) and Internal Rate of Return (IRR) for a project	b) Definition and steps of project cycle; Details of project identification, feasibility study and appraisal; Definition, objectives, scopes and types of project appraisal; Technical, Environmental, Financial and Economic appraisal; Discounting technique; Calculation of NPV, BCR and IRR;	Lecture Discussion Multimedia presentation, Assignment	Quiz/MCQ Short answer Essay type answer, Report
▪ Write project proposal from outputs of planning using appropriate pro-forma ▪ Explain approval procedure of development projects in Bangladesh	c) Introduction to Project Pro-forma (DPP, TPP); Project Approval and Revision Procedures	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Explain monitoring and evaluation with areas and tools ▪ Compare and contrast between monitoring and evaluation ▪ Describe purpose, rationale and benefits of monitoring and evaluation ▪ Mention types of evaluation ▪ Outline necessity of post evaluation ▪ Classify types of indicators for project evaluation with example ▪ Name principles of extension project evaluation ▪ Describe steps of extension project evaluation ▪ Justify role of IMED in project monitoring and evaluation ▪ Fill-up IMED formats for project monitoring and evaluation ▪ Explain sustainability of development projects	Project Management: a) Project Monitoring and Evaluation: Definition, areas, tools and purposes of monitoring and evaluation; basic difference between monitoring and evaluation; rationale for monitoring and evaluation; benefits of monitoring and evaluation; types of evaluation; Post evaluations and its necessity; Different Types of indicators for evaluation; Principles of extension project evaluation; Phases and steps in an evaluation process; Extension project evaluation process; Role of IMED in project monitoring and evaluation; Explanation and exercise of IMED formats; Sustainability of Development Projects	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Explain indicators and targets with suitable examples ▪ Describe technical characteristics of SMART indicators ▪ Explain characteristics of good indicators with suitable examples ▪ Mention sources of indicators ▪ Analyze factors considered in setting targets ▪ Express targets in different ways	b) Indicators and Targets for Project Monitoring and Evaluation: Concept of indicators and targets; Explanation of SMART indicators; Dimension of indicators; Characteristics of good indicators; Sources of indicators; Target setting for indicators; Factors considered in setting targets; Ways of targets expression; Types of rates of change of indicators; Baseline and Endline Surveys	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Explain types of rates of change of indicators ▪ Explain Baseline and Endline Surveys			
▪ Explain components of result chain ▪ Prepare vertical and horizontal result chain from a given activity ▪ Create logic model for a project or a programme or an organization	c. Result Chain and Logic Model: Concepts and component of result chain; Input-Activity-Output-Outcome-Impact; Horizontal and vertical result chain; Definition of logic model, characteristics of good logic model and wording of results	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

Reference Books:

1. Bhuiyan MH, Miah MAM, Akanda MGR, Bashar MA (2014) Agricultural Extension Education, G Science Implementation & Publication, Karwanbazar, Dhaka, Bangladesh.
2. Ray GL (2011) Extension Communication and Management. Kalyani Publishers, New Delhi, India.
3. Sandhu, Anoop Singh (1994) Extension Programme Planning, Calcutta, India: Oxford & IBH Publisher Co. Pvt. Ltd.

Course Code: AEIS 505 Course Title : Group Dynamics and Leadership Development (Compulsory)	Credit Hour: 03	Semester: Jan-June	
Rationale: This course is designed to provide an in-depth knowledge of the concept of group dynamics and theories of leadership, and their application to real-life situations.			
Course Outcomes: • Compare and contrast a selected number of group dynamics and leadership theories. • Characterize different types of group in organization, and identify their strength and limitations. • Identify and analyse leadership styles in the workplace and group behavior in organization. • Identify and evaluate a real-world business case, and develop a solution by applying appropriate leadership theory in the given situation.			
Intended Learning Outcomes (ILOs) The students will be able to	Course Content	Teaching-Lecturing Strategies	Assessment Strategies
▪ Classify the different type of groups and their characteristics, ▪ Apply principles of working with group.	Concept of Group: Definition, characteristics, factors, reasons exchange theory, classification of a group, groups in organization and principles of working with group.	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Compare and contrast types of group dynamics, ▪ Explain and apply how to mobilize the groups, ▪ Apply different problem solving techniques in group.	Group Dynamics: Definition and types of group dynamics, mobilization of group, and group problem solving technique.	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Generalize the concept of committee, ▪ Contrast the advantage and disadvantage of committee, ▪ Classify the different types of committee.	Participation and Committee: Concept, advantages and disadvantages, importance, classification.	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Conceptualize theories of leadership, ▪ Differentiate and describe the traits of leadership, ▪ Compare the differences between leader and manager	Concept & approaches of leadership: Trait, skills, style, situational (chapter 1,2,3,4,5)	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Elaborate different theories of leadership, ▪ Judge different leadership styles, ▪ Apply leadership styles in organizational setting,	Leadership Theories: Contingency, path-goal, leader-member exchange, Transformational, (Chapter 6,7,8,9)	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Discuss the leadership ethics, ▪ Employ leadership ethics in group and organization.	Leadership Ethics: Team leadership, psychodynamic leadership, and leadership ethics (Chapter 12,13,16)	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Apply insight of different theories of leadership in real world setting.	Assignment of use of leadership, Theories in Agricultural Extension Service	Assignment preparation	Presentation Report.
<u>Reference Books:</u> 1. Northouse, P.G. (2013). Leadership Theory and Practice. (6 th Edition). Sage Publications, Inc. 2. Robbins, S.P. and Judge, T.A. (2015). Organizational Behavior (15 th Edition). Pearson.			

Course Code: AEIS 506 Course Title : Research Methodology in Social Sciences (Compulsory)	Credit Hour: 03	Semester: January-June	
Rationale: This course is designed to provide basic concepts on scientific social research methods and their approaches. It includes discussions on sampling techniques, research designs and data analysis.			
Course Outcomes: • Explain basic framework of research process, various research designs and techniques • Ascertain the research gap by addressing literature review in a scientific manner 3. Identify various sources of information for data collection • Explain the ethical dimensions of conducting applied research 5. Address research problem and develop research proposal • Analyze data and write scientific report to achieve the project goal			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Describe the concepts of science, research, fact, law and theory ▪ Identify ideal research features/characteristics ▪ Identification of research problems and prioritization techniques of identified problems ▪ Explain types of research ▪ Discuss fundamental basis of research planning ▪ Illustrate the preparation of standard research proposal	Social Research: Concept of science, research, fact, theory and problem; characteristics of research, types of research (qualitative, quantitative); identification and prioritization of researchable problems; steps of conducting social research; preparation of research proposal	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Explain different types of data and variables ▪ Describe hypothesis and research instruments in accordance with the research objectives ▪ Justify validity and reliability test of data collecting instruments ▪ Summarize content analysis	Data, Variable, Hypothesis and Research Instruments: Types of data - qualitative, quantitative, discrete and continuous; variable - nature and types of variables; hypothesis - importance, nature and types, formulation and testing; preparation of	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

	research instruments; validity, reliability and objectivity in testing research instruments		
Describe methods of data collection	Methods of Data Collection: Survey (by using interview schedule, mail questionnaire, email questionnaire, etc.), PRA & RRA; case study and observation	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
- Illustrate the concept and levels of measurement - Explain different measurement scales and techniques	Measurement: Concept of measurement, levels of measurement; tests and scales; Attitude scales - equal appearing interval scale; summated rating scale cumulative (Guttman) scale; sociometry, norm-referenced and criterion-referenced techniques of measurement	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
- Discuss different types of research - Design and procedure of sampling - Organize data collection	Research Designs: Types of research designs; sampling procedure – locale, population and sample; methods of sampling; collection of data	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
- Explain coding, categorization, tabulation and analysis of data - Measure different statistical tests and predict the uses - Describe presentation and interpretation of data - Practice preparation of research report	Analysis, Presentation and Interpretation of Data: Categorization, coding and tabulation of data; different statistical tests and their uses; forms of presentation of data; interpretation of data - meaning, needs, techniques and precautions; preparation of research report -	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

	format, quoting references, style of writing, using footnotes, citation of references & bibliography; use of graphics (Charts, histogram, pie-graphs, pictures, plates, etc.) in interpretation of data		
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Reference Books:

1. Kothari, C. R. 2004. Research Methodology: Methods and Techniques. New Age International (P) Ltd.
2. Neuman, W. L. and Robson, K. 2011. *Basics of social research: Qualitative and quantitative approaches* (3rd Canadian ed.). Pearson.
3. Bryman, A. 2016. Social Research Methods. Oxford University Press.
4. Keren, G and Lewis, C. 1993. [A Handbook for Data Analysis in the Behavioral Sciences: Statistical Issues](#). Lawrence Erlbaum Associates.

Course Code: AEIS 507 Course Title : Statistics for Socio-Economic Research (Elective)	Credit Hour: 03	Semester: January-June	
Rationale: This course is designed to introduce students with processing and analysis of qualitative and quantitative data for social research.			
Course Outcomes: • Explain data processing • Compare between parametric and non-parametric statistics • Apply knowledge on both descriptive and statistical analysis • Decide appropriate statistical analysis to perform a specific task			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Describe editing, coding, classification and tabulation for primary data ▪ Differentiate between parametric and non-parametric test ▪ Explain about descriptive statistics	Processing and Analysis of Data: Processing of data editing, coding, categorization and tabulation; features of parametric and non-parametric test; frequency distribution; measures of central tendency; measures of dispersion; coefficient of variation; degrees of freedom	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Use different types of t-test ▪ Determine t value and its interpretation	T-test: Concept, types (Paired t-test and independent-samples t-test), uses, assumptions and interpretation	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Describe chi-square test ▪ Use different types of chi-square test ▪ Determine of chi-square value and its interpretation	Chi-square test: Concept, single classification, two-way classification and two-by-two tables; properties of chi-square distribution; condition for the application of chi-square test.	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Define correlation and its types ▪ Compare between Pearson product moment and Spearman rank correlation	Correlation: definition, Karl Pearson product moment correlation, Spearman’s rank correlation; Properties of	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

Explain reasons for choosing correlation analysis for conducting research	correlation coefficient, Correlation matrix		
- Define regression analysis and its types. - Compare between correlation and regression. - Apply regression equation	Regression: Concept, difference between correlation and regression, multiple regression, stepwise multiple regression; differentiate between enter method and stepwise method	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
Use statistical software packages for data analysis and interpretation	Hands on statistical software packages	Demonstration Discussion Exercise, Assignment	Report
<u>Reference Books:</u> G. L. Roy and S. Mondal. 1999. Research Methods in Social Sciences and Extension Education. Naya Prokash, Calcutta, India. A. M. A. Karim. 2001. Understanding Social Research. M.N. Mallick and Co, Mymensing, Bangladesh. A. R. Ahmed, M.A.A. Bhuiyan, Z. A. Ahmed and M.Z. Hossain. 2004. Methods of Statistics. S. Ahmed and Associates, Manikgonj, Bangladesh.			

Course Code: AEIS 508 Course Title: Agricultural Journalism (Elective)	Credit Hour: 03	Semester: July-December	
Rationale: This course is designed to acquaint the students with the art of journalism with special emphasis on agricultural journalism and its practical implication in agricultural extension work for gearing up agricultural development.			
Course Outcomes: • Acquaint students with the basic and modern concept of Journalism, its ethics and principles • Learn report and feature writing, interviewing covering general and agricultural Journalism • Journalism • Explain features of Public Relation			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Define journalism, agricultural/ farm journalism ▪ Explain canons of journalism ▪ Summarize ethics of journalism ▪ Describe history of agricultural journalism in Bangladesh ▪ Explain various journalistic and related terms	Concept of journalism: Agricultural/farm journalism, Canons and ethics of journalism, Classification of journalism, History of farm journalism Acquaintance with various journalistic and related terms, online journalism	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Sketch principles of farm journalism ▪ Justify opportunities of farm journalism in Bangladesh ▪ Evaluate role of journalism and mass media in agricultural development	Farm journalism: Principles of farm journalism, agricultural journalism, its scope and implication in agricultural extension work	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Classify types of reporting ▪ Describe writing style of farm journalism ▪ Mention general writing tips ▪ Outline six-step writing process ▪ Explain characteristics of good news	Reporting: Types of reporting, Principles, rules and style of writing news, feature articles, success stories and popular articles for newspapers, magazines, radio and television broadcasts	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Prepare news story following inverted pyramid style ▪ Mention characteristics of feature stories ▪ Explain importance of success stories in disseminating agricultural innovations ▪ Prepare feature story ▪ Prepare success story ▪ Prepare scripts for radio and television			
• Explain editing • Classify editing • Describe skills required for an editor • Execute editing of a news story • Explain technical editing • Explain cutting copy with example • Execute proof reading of articles	Editing: Concept and types of editing, skills for editing, Steps of editing news, Technical editing, cutting copy, fixing wordy writing, Proof reading: Symbols used for proof reading and manner of direction	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
• Explain processes of public relation • Prepare hand out • Prepare a press release • Describe factors considered in organizing press campaign • Conduct radio / TV interviews	Public relations: Key concepts and processes, Preparation of handout, press release, organizing press campaign, radio / TV interviews	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
• Describe characteristics of good newspaper • Sketch organogram of a newspaper • State functions of different departments of newspaper • Explain functions of different editors • Outline types of reporters Prepare editorial for a newspaper • Analyze role of editorial of a newspaper	Newspaper: Types of Newspaper, Characteristics of good newspaper, Organogram of a daily newspaper, Departments of a newspaper, Different types of reporters and editors and their roles, The make-up of a newspaper, Types of editorial, Steps of writing editorial	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

Reference Books:

1. Harcup, Tony (2009), Journalism: Principles and Practice, [Thousand Oaks, California: Sage Publications](#),
2. Helen Sissions (2007), Practical Journalism, Auckland University of Technology, NZ, Sage Publications
3. Mondal, Subin K, Dr. (2010), Hand Book of Farm Journalism, Pulari Publishers
4. Ray. G.L., Mondal, S, (2005), Journalism including Communication, farm and rural journalism, public relations, Kalyani Publishers

Course Code: AEIS 509 Course Title : Psychology of Human Behavior (Elective)	Credit Hour: 03	Semester: January-June	
Rationale: This course is design to provide an advanced understanding on human behavioural characteristics such as attitude, perception, personality and self-development.			
Course Outcomes: • After completing the course, students will be able to • Describe the human and their behavior in work settings, • Interpret human behavior in work, • Apply methods to motivate human in accomplishing organizational goal			
Intended Learning Outcomes (ILOs) The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Describe psychology and human behavior, ▪ Apply methods for analysing human behavior in work,	Introduction to psychology: Concept of psychology & human behavior rationale, Methods of studying psychology,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Describe and measure human attitude & perception, ▪ Evaluate human attitude towards agricultural practices,	Attitude & perception: Concept, formation of attitude, measurement of attitude, principles and construction of perception,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Articulate the basic of personality development, ▪ Apply techniques to develop personality and enhance capacity, ▪ Comprehend and use different self-development methods,	Personality and Self-development: Concept of personality and self-development, factors of personality, techniques of personality development,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Differentiate between external and internal forces of group dynamics, ▪ Explain planned social change in agriculture, ▪ Discuss social power and its influence in rural development,	Group Dynamics: Concept, Internal & external forces of group dynamics, social change and social power,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Apply latest theoretical and practice aspects of personality, attitude and perception in explaining human behavior in agriculture,	Assignment on human behavior regarding technology generation and diffusion in agriculture,	Assignment	Report
<u>Reference Books:</u> 1. Mishra,B.K. 2008. Psychology: The Study of Human Behavior, PHI Learning Private Ltd. New Delhi. 2. Bhuiyan, M.H., Miah, M.A.M, Akanda, M.G.R and Bashar, M.A. 2014. Agricultural Extension Education. G-Science Implementation and Publication. Dhaka.			

Course Code: AEIS 510 Course Title : Non-governmental Organization in Rural Development (Elective)	Credit Hour: 03	Semester: July-December	
Rationale: This course is designed to provide an in-depth understanding of NGOs’ activities and roles in development.			
Course Outcomes: - Summarize the strategic issues and organisational challenges facing NGOs, - Conceptualize the different strategies and approaches commonly adopted by NGOs - Develop relevant management competencies, leadership skills and analytical capabilities			
Intended Learning Outcomes (ILOs) The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
- State clearly about NGOs and its types - Differentiate between GOs and NGOs - Evaluate the features of NGOs	Understanding NGOs: Concept and meaning of NGOs; difference between GO and NGO; Types of NGOs; Initiation and gradual growth of NGOs in Bangladesh; missions, goals and philosophies of NGOs; criticism of NGOs in Bangladesh	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
- Identify the activities run by NGOs - Explain NGOs’ impact on Bangladesh economy	Impact of NGOs’ Activities in Bangladesh: Income generation activities of NGOs in Bangladesh; Contribution of NGOs to Bangladesh Economy	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
Describe different areas of activities run by selected NGOs	Rural Development and Farm Management Activities by Selected NGOs: BRAC, PROSHIKA, RDRS, GKF, DIPSHIKHA, TMSS and CARE	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
- Provide an overview of the major sources of NGO funds - Outline a strategic approach to financial sustainability	Mobilising and Managing Financial Resources: Major sources of NGO funds; Approaches to financial sustainability;	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Interpret the main elements of financial information of NGOs	Mobilization of non-financial resources		
▪ Create project concept paper ▪ Manage projects of NGOs	Project Management: Preparation of project concept paper (PCP); Management and operation of projects by the NGOs; Partnership programs of NGOs with the GOs	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Explain the key strategic issues facing the NGO sector ▪ Criticize the activities done by the different NGOs in Bangladesh	NGO Management: The Strategic Issues of NGO management; NGO registration, renewal of registration, rules & regulations; NGO accountability; NGO governance, Apex bodies of NGOs (NGO Affairs Bureau, PKSF, etc.); Steps of NGO formation, Application for establishing NGO, Application for fund collection for NGO from home and abroad	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

Reference Books:

1. Lewis, D. (2014). Non-Governmental Organizations, Management and Development. Routledge. London, UK.
2. Shigetomi, S. (2002). The State and NGOs: Perspective from Asia. Institute of Southeast Asian Studies. Singapore.
3. Fisher, J. (1998). Nongovernments: NGOs and the Political Development of the Third World. Kumarian Press, West Hartford, USA.

Course Code: AEIS 511 Course Title : Gender Issue and Development (Elective)	Credit Hour: 03	Semester: January-June	
Rationale: This course is designed to help students to explore some of the key ideas and issues in Gender Issue and Development, and their implication for policy and practice.			
Course Outcomes: • Acquire knowledge on different gender issue and women empowerment • Explain different gender theory and apply them in research and policy • Describe the role of gender in agricultural development			
Intended Learning Outcomes (ILOs) The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
• Describe why gender perspective is important in development initiatives • Verify the variety of development perspectives that address gender issues.	Gender and Development: Concepts and Definitions : Introduction, Quick definitions, Detailed explanations and further reading-Culture, Gender analysis, Gender Discrimination, Gender Division of Labor, Gender Equality and Equity, Gender Mainstreaming, Gender Needs, Gender planning, Gender Relations, Gender Training, Gender Violence, Sex and Gender, Social Justice, WID/GAD, Women’s Empowerment, Women’s Human Rights.	Lecture Discussion Multimedia presentation	Lecture Discussion Multimedia presentation
• Construct our understanding of feminist theories, gender issues and development paradigms • Illustrate the impact of these policies on legislation, education, welfare reform, culture and other economic	Theoretical Perspectives on Gender and Development: Why Theory? Why Gender? and Why Development?, Feminism and development: Theoretical perspective, Feminist theory and		Lecture Discussion Multimedia presentation

and social issues affecting women's lives • Analyze the policies of international development and financial institutions and agencies • Discuss alternative approaches and practices to women and development.	development: Implication for policy, Research and action, Alternative Approaches to women and development, The women's movement and Development		
• Interpret the importance of gender in agriculture and development • Construct various strategies or policy against different challenges facing in agricultural sector due to gender perspective	Gender in Agriculture and Development: Gender, Agriculture and development, Traditional and Modern methods of agriculture and development, Land tenure and Utilization system, Gender Relations in Agricultural division of labor, Agriculture and Mechanization and gender implications, Agriculture and technology from a gender perspective, Policy issues in agricultural development and gender implications, Challenges facing agricultural sector from a gender perspective and measures for redress.	Lecture Discussion Multimedia presentation	Quiz/ MCQ, Short answer, Essay type answer
• Validate women empowerment in agricultural sector for sustainable development	Gender and Sustainable Development: Maximizing the Economic, Social and Environmental Role of Women: Economic and Gender, Women and Economic Growth, Women and Poverty Reduction, Women and Technology, Women and Management, Women Entrepreneurs, Society and Gender,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

	Women and Education, Women and Health, Women and Governance, Environment and Gender, Women and Sustainable Consumption, Women and Sustainable Production, Women and Climate change.		
• Update with latest theoretical and practical aspects of Gender and Development	Latest Research Findings and Information Regarding Extension Organization and Management	Assignment	Report
<u>Reference Books:</u> 1. OECD (2008). Gender and Sustainable Development: Maximizing the Economic, Social and Environmental Role of Women. 2. Reeves, H. and S. Baden, (2000). Gender and Development: Concepts and Definition. BRIDGE (development- gender). Institute of Development Studies, University of Sussex. Report no. 55. 3. Parpart, J.L., M.P. Connelly and V.E. Barriteau, (2000). Theoretical Perspectives on Gender and Development. International Development Research Centre. Ottawa, Canada, ISBN 0-88936-910-0.			

Course Code: AEIS 512 Course Title : GIS and Remote sensing in agriculture (Elective)	Credit Hour: 03	Semester: January-June	
Rationale: This course is designed to gather knowledge on how GIS and Remote sensing can be applied for the development of agriculture.			
Course Outcomes: • Apply knowledge on GIS • Explain the fundamental information regarding remote sensing • Describe how agriculture sector can be benefited through utilize GIS and Remote sensing technique			
Intended Learning Outcomes (ILOs) The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
• Describe about GIS and types of GIS data • Explain the use of GIS in agriculture	Introduction to GIS Concept and definition of GIS; Data vs. Information; Spatial data and Attribute data, Uses of GIS in agriculture.	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
• Describe the use of GPS in collecting spatial data • Prepare a final map from a base map • Describe the importance of map	Collection and presentation of spatial data GPS-definition, basic function of GPS, Skill required to use GPS, Advantages and disadvantages of using GPS; Map-definition, components of map, procedure to prepare a map, land utilization mapping, crop suitability mapping.	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
• Define remote sensing its action process • Describe how remote sensing evolved	Introduction to Remote sensing Remote sensing- definition, Electro- magnetic radiation, sensors, passive remote sensing; active remote sensing; remote sensing platform; chronology of remote sensing.	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
• Describe the use of remote sensing in agriculture • Explain crop status through image	Remote sensing application in agriculture Fields of application; Application in agriculture; Monitoring of crop status,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

	Crop yield forecasting, crop identification.		
• Update student with latest theoretical and practical aspects of Gender and Development	Latest Research Findings and Information on GIS and Remote sensing in agriculture	Assignment	Report
<u>Reference Books:</u> 1. O, Huisman and A. De. Rolf. 2001. Principles of Geographic Information Systems: An introductory textbook. ITC, the Netherlands. 2. Wang, G. and Weng, O. 2012. Remote sensing of natural resources. CRC press, Tailor and Francis group. 3. S. M. M. Haque . 2008. Basic Concept on GIS. A booklet of the training program ‘Certificate Course on GIS’. Jahangir Nagar University, Savar, Dhaka, Bangladesh. 4. B. Anderson. 2003. Introduction to Arc View. 2nd edition. University of New Hampshire Cooperative Extension. USA.			

Course Code: AEIS 513 Course Title: Adult Education and Rural Development (Elective)	Credit Hour: 03	Semester: July-December	
Rationale: This course is designed to acquaint students with key concepts of a practical outcome in the form of a policy effective kit that might be of use in giving hints on practical guidance to adult education suited to the rural development in Bangladesh.			
Course Outcomes: • Justify techniques of individual adult learner needs and aspirations. • Identify appropriate adult learning experiences using for rural development. • Address ethical challenges through a adult education framework that are shaped by a belief in social justice, equity, and integrity. • Advocate for effective programs and services that support adult learners’ needs for continued rural growth and development. • Explain scope and hindrance of common rural agricultural development policies in Bangladesh. • Practice rural poverty dynamics and developments policies.			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Describe the concept, growth and development of adult education ▪ Interpret adult education influence on national development	Introduction to Adult Education: The concept of adult education; growth and development of adult education; adult education and national development	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Describe Philosophy of adult education	Philosophy of Adult Education: Concept of Philosophy; the role of Philosophy in teaching of adults	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Explain the concept and myths of adult learning	Adult Learning: The concept of learning; some myths of adult learning	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Justify administrative structure, policy formulation and planning of adult education in Bangladesh	Policy and Administrative Structures of Adult Education: Historical background of adult educational policy formulation and planning in Bangladesh; the administrative structure of adult education in	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

	Bangladesh and other countries		
▪ Illustrate adult education practicing different methods ▪ Compare suitable methods within the literate and illiterate peoples	Methods of Teaching Adults: Adult education practice methods in Bangladesh; methods useful with illiterate and literate groups	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Interpret within the politics and adult education program in Bangladesh ▪ Describe the role of politics on adult education program	Politics in the Administration of Adult Education: Relationship between politics and Adult Education; role of politics on Adult Education in Bangladesh	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Justify the level of contributions of adult education program towards farmers development ▪ Illustrate the problem and prospects of adult education program	Adult Education and Farmers Development in Bangladesh: Contributions of adult education programs towards farmers' development; problems and Prospects	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Describe the concept, dimensions, programs, strategies and hindrance of rural development based on Bangladesh and international perspectives	Concept and dimensions of Rural Development: 'Rural' and 'rural development'; concepts and dimensions of Bangladesh and international rural development; rural development institutions, programs, strategies and hindrances in Bangladesh	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Analyze agricultural policies and rural development regulation in Bangladesh ▪ Explain the scopes and hindrance of rural development policies	Rural Agricultural Policy and Development: Analysis of the common agricultural policies and the rural development regulation in Bangladesh; scopes and hindrances of rural policy development in Bangladesh	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Describe poverty dynamics, poverty traps and poverty development policies	Rural poverty dynamics: Rural poverty dynamics; poverty and risk; poverty and saving; uncovering poverty traps and threshold	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Compare between poverty and risk, and poverty and savings	effects; rural poverty development policy		
<u>References Books:</u> 1. Gasperini, L and Atchoarena, D. 2003. Education for rural development: towards new policy responses. International Institute for <i>Educational</i> Planning. 2. Singh, K. 2009. Rural Development: Principles, Policies and Management. SAGE Publications Pvt. Ltd.. Foley, G. 2004. <u>Dimensions of Adult Learning: Adult Education and Training in a Global Era</u>. Allen & Unwin. 3. Rogers, A. 2010. <u>Teaching Adults</u>. Open University press. Milton Keynes, United Kingdom. 4. Chambers, R. 1983. Rural Development: Putting the Last First. Longman.			

Course Code: AEIS 514 Course Title : Climate Change and Agriculture (Elective)	Credit Hour: 03	Semester: July-December	
Rationale: The aim of the course is to make students knowledgeable about climate change and climate change management in agriculture			
Course Outcomes: • Explain the climate variability and climate change • Apply tools and processes for assessing climate-related hazards, and • Formulate livelihood adaptation options.			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Describe climate variability and climate change, ▪ Evaluate vulnerability to climate variability and change, and ▪ Apply participatory tools and processes for assessing climate hazards, vulnerabilities and risks.	Climate change management: Understanding climate variability and climate change; Greenhouse effect and its consequences on climate; Climate change scenarios for Bangladesh; Understanding vulnerability to climate variability and change; Future climate change affect the agriculture of drought-prone areas; Impacts of increased climate variability and change on rural livelihoods; Strategic drought management; Understanding the participatory tools and processes for assessing climate-related hazards, vulnerabilities and risks in agriculture; and Identifying key climate risks that have significant impact on communities in general and livelihoods in particular.	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Prepare forecast for adaptation options and building adaptive capacity,	Adaptation and adaptive capacity: Preparing livelihood adaptation options to manage climate variability and change; Understanding	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Assess livelihood adaptation options, ▪ Develop drought risk management strategies, and ▪ Formulate policy information for improving adaptive capacity.	the relevance of adaptation options for livelihood development; Gain understanding of changing livelihood portfolios in drought-prone areas; Describing the various types of forecast products; Elaborating how current forecast products may be used for drought risk management; and Understanding rainfall forecasts and their use in decision-making.		
▪ Describe perception and its influencing factors ▪ Explain relationship between perception and adaption to climate change ▪ Select crop specific adaption strategies.	Farmers perception and adaptation to climate change: Perception-concept and definition; Factors influence farmers perception; Relationship between farmers perception and adaptation to climate change; Common adaption practices followed by the farmers; Barriers to adaption.	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Define climate drivers or parameters. ▪ Explain effect of climate change drivers ▪ Compare between effect of climate and non-climate drivers	Climate change parameters/drivers: Concept, definition and direct and indirect effects of climate change drivers (Temperature, rainfall, drought, sea level rise, salinity etc.) and non-climate drivers (Geological process, land use change, land cover modification, invasive species and pollution).	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

Reference Books:

1. Henson, R. 2007. The Rough Guide to Climate Change. Second Edition, Rough Guides Ltd, New York.
2. Ravindranath, N.H. and Sathaye, J.A. 2003. Climate change and developing countries. Kluwer Academic Publishers, New York.
3. Yu, W.H. et al. 2010. Climate change risks and food security in Bangladesh. Earthscan Publications Ltd. London.
4. Wreford, A., Moran, D. and Adger, N. 2010. Climate Change and agriculture: impacts, adaptation and mitigation. OECD Publications, France.
5. Adger, W. N., Lorenzoni I. and O'Brien, K. L. 2009. Adapting to climate change: thresholds, values, governance. Cambridge University Press, UK.
6. IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1132 pp.

Course Code: AEIS 515 Course Title: Extension Administration, Supervision and Management (Elective)	Credit Hour: 03	Semester: July-December	
Rationale: This course is designed to provide knowledge to individual learner on practical office administration, leadership abilities, and developing talented supervisory and management skills for their subordinates.			
Course Outcomes: • Conceptualize knowledge on extension administration and build the capacity in extension management and supervision. • Illustrate historical agricultural administration and extension services. • Explain conflict, principal, theories and management concept of program management. • Utilize administrative theories in the organizations. • Practice performance appraisal stress in managing, grievance handling techniques for management of sustainable agriculture • Analyze change agents and client system problems.			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Compare general and extension administration	Introduction to Agricultural Extension administration: Concept, scope and characteristics of extension administration; extension administration vs general administration; historical perspective of agricultural administration with special reference to extension services	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Justify administrative role, function and responsibilities ▪ Illustrate administrative process, techniques and principles	Process of Functional Administration: Administrative vs management changes and implementation; administrative role, function and responsibilities; administrative process, techniques and principles applied to agricultural organizations	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

Describe concept, rules and principles of supervision	Introductory to Supervision: Components of supervision; Rules and principles of supervision, coordination and supervision techniques	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
- Implement techniques of administrative theories - Describe administrative communication and forces of administration	Administrative Theories and Communication: Administrative theories and their implementations; theory of X and Y; decision making and human relationships; management by objective (MBO); administrative communication and analysis of research studies in agricultural administration and their implications to agricultural development and future research; identification of forces affecting administration of agricultural programs	Lecture Discussion Multimedia presentation Assignment	Quiz/MCQ Short answer Essay type answer Report
- Explain conflict management, grievance handling, and performance appraisal stress - Describe principal theories and management concept of program management for sustainable agricultural development - Analyze change agent and client system problems	Management and Conflict Management: Conflict management; principal theories and management concept of program management; concept and principles of supervision; performance appraisal stress in managing; grievance handling; analysis of change agents and client systems problems; management of sustainable agriculture	Lecture Multi-media presentation Group discussion Exercise practice Assignment	Quiz/MCQ Short answer Essay type answer Report

References Books:

1. Clark, R. K. 1977. Basic concepts and theories of administration and supervision as applied to extension-community development programs. Dept. of Continuing and Vocational Education, University of Wisconsin-Madison.
2. Selznick, P. 1984. Leadership in Administration: A Sociological Interpretation. University of California Press; First edition.
3. Drucker, P. F. 2007. Management: Tasks, responsibilities. Transaction Publishers.
4. Eccles, R. G., Nohria, E and James D. 1992. Beyond the Hype: Rediscovering the Essence of Management. Harvard Business School Press.

Course Code: AEIS 516 Course Title : Communication Skills (Elective)	Credit Hour: 03	Semester: January-June	
Rationale: This course is designed to provide principles of effective communication and teach students to learn how to communicate more effectively at work.			
Course Outcomes: • Distinguish between formal and informal communication • Apply the key oral and writing skills for effective communication • Overcome the speech and written anxiety and deliver effective communication at work			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Differentiate formal and informal discourse ▪ Describe the model of human communication ▪ Use the conventions of formal writing and speaking	Human communication: Oral and written communication, formal and informal discourse, advantages of studying and writing together, model of human communication, conventions of formal writing and speaking, exploration of thoughts and feelings	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Define and distinguish between types of messages ▪ Apprehend physical attributes of presentation style ▪ Apprehend vocal attributes of presentation style	Presentation style: Types of messages & their preparation, physical attributes of presentation style, vocal attributes of presentation style.	Lecture Discussion Multimedia presentation, Assignment	Quiz/MCQ Short answer Essay type answer Presentation Report
▪ Describe the speech anxiety ▪ Use techniques to cope with speech anxiety ▪ Describe writing anxiety ▪ Use techniques to cope with writing anxiety	Communication apprehension: Speech anxiety, understanding speech anxiety, coping with anxiety, writing anxiety, understanding written anxiety, coping with writing anxiety	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Apprehend the skills in oral and written communication	Critical skills for effective communication: Skills in oral & written	Lecture Discussion	Quiz/MCQ Short answer

Apply the techniques to overcome the barriers of effective communication	communication, communication barriers, techniques of effective communication, importance and listening	Multimedia presentation	Essay type answer
<u>Reference Books:</u> 1. J.C. Pearson and P.E. Nelson, 2010. Human Communication. McGraw Hill, New York, USA 2. O.P. Dahma, O.P. Bhatuagar. 2010. Education and Communication for Development. Oxford & Publishing Co. Pvt. Ltd. New Delhi, India 3. R.A. Katula, C.A. Martin. 2012. Communication: Writing and Speaking, Brown and Company. Boston, USA			

Course Code: AEIS 517 Course Title : Community Development (Elective)	Credit Hour: 3	Semester: July-December	
Rationale: This course is developed to gather knowledge on how to build and sustain communities by the learners. It also teaches students how to work within a group, with governmental, political, economic, social structures, policies, and multicultural settings.			
Course Outcomes: • Explain about the rural realities. • Conceptualize sensitivity and commitment for working with rural communities. • Utilize the government and voluntary efforts towards rural community development. • Practice with specific skills and techniques of working with rural communities.			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Describe the concept of community development ▪ Analyze local and global context of community development based on theoretical and participial perspectives	Theoretical background of community development: 1. Understanding of community development and social action 2. The local and global contexts of community development 3. Theoretical and practical perspectives of community development 4. Community development method and analysis 5. Elements, process, scope, faith and themes of community development	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Boost up community work ▪ Compare with community participation and politics ▪ Practice working with diversity	Community work and participation: 1. Community work, self-determination, community pace and growth in community capacity 2. Community participation and politics	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

	3. Working in community based human services 4. Working with diversity		
▪ Evaluate community development work in Bangladesh and other SAARC countries ▪ Address community development problem in Bangladesh and other developing countries	Community development in the third world: 1.Strategies of community development works in Bangladesh and other SAARK countries 2. Community development problems in Bangladesh and other developing countries	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Describe community leadership, conflict and management mechanism	Community management: 1. Rural and urban community leadership 2. conflict and mechanism of management	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Explain community development by nature ▪ Implement social action process ▪ Identify challenges and future prospects of community development	Community development by nature: 1. Cultural, environmental and spiritual aspects of community development and social action 2. Social action processes 3. Challenges and future prospects of community development and social activism	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
<u>Reference Books:</u> 1. Ledwith, M. 2005. Community development: A critical approach. Bristol University Press. 2. Phillips, R. and Pittman, R. P. 2014. An Introduction to Community Development. Routledge. 3. Homan, M. S. 2015. Promoting Community Change: Making It Happen in the Real World. Cengage Learning (6 th Ed.).			

Course Code: AEIS 518 Course Title: Planning, Monitoring and Evaluation of Extension Program (Elective)	Credit Hour: 03	Semester: July-December	
Rationale: This course is designed to enable students so that they can prepare, monitor and evaluate various extension programs while working in extension organization.			
Course Outcomes: • Acquaint with concepts, principle, models of extension programme planning • Prepare programme using models of programme planning • Describe concepts, tools and techniques of programme monitoring and evaluation			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
• Define extension programme • Mention and explain each principle of extension programme planning • Describe models of programme planning • Explain participatory method of programme planning • Interpret various participatory tools of programme planning • Design desired participatory tool for programme planning • Appraise role of extension agents and specialist in extension program planning • Summarize research findings in extension program planning • Develop alternative approaches to program planning	Extension Program Planning: Concept; Principles of extension program planning; Program planning model; Peoples participation in program planning; Research in extension program planning; Role of extension agents and specialist in extension program planning; Alternative approaches to program planning	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Explain meaning, purpose and scope of program monitoring ▪ Differentiate between	Extension Program Monitoring:	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

quantitative and qualitative monitoring - Analyze advantages and disadvantages of different tools of monitoring - Prepare monitoring plan with key indicators for programs like demonstrations, field days, farmers training and motivational tours/visits	Meaning, purpose and scope of monitoring; Quantitative and qualitative monitoring; procedure for monitoring of demonstrations and field days, farmers groups, farmers training, and motivational tours/visits		
- Explain key concepts and types of programme evaluation - Appraise principles of programme evaluation - Describe steps of extension programme evaluation - Develop appropriate indicators for evaluation - Identify suitable evaluation methodology - Design evaluation framework of extension programs - Prepare evaluation report - Identify and explain reasons of failure of a programme - Justify the role of using MIS in extension program monitoring and evaluation - Describe levels of people's participation - Argue advantages and disadvantages of people's participation in programme planning, monitoring and evaluation	Extension Program Evaluation: Basic concepts in evaluation; steps in evaluating extension programs; aspects of evaluation of a training program and a/v aids: total effect of Training, methods and techniques used; instructors, trainee's performance and content; Review of evaluation study of an extension program Why programme fails? Use of management information system (MIS) for effective program, Future extension programs for community development, People's participation in extension programs, levels of participation, Advantages and disadvantages of people's participation, Participatory evaluation	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

Reference Books:

1. Bhuiyan, M.H, Miah, M.A.M, Akanda, M.G.R, Bashar, M.A (2014) Agricultural Extension Education, g-Science Implementation & Publication, Karwanbazar, Dhaka, Bangladesh.
2. Ray, G.L (2011) Extension Communication and Management. Kalyani Publishers, New Delhi, India.
3. Sandhu, Anoop Singh (1994) Extension Programme Planning, Calcutta, India: Oxford & IBH Publisher Co. Pvt. Ltd.

Course Code: AEIS 519 Course Title : Agri-environment, Development and Sustainability (Elective)	Credit Hour: 03	Semester: January-June	
Rationale: The aim of the course is to make students knowledgeable about agri-environmental management and sustainable agricultural development in the context of climate change.			
Course Outcomes: • Understand the interrelationships between agriculture and environment • Apply agri-environmental management approaches and tools • Evaluate vulnerability, adaptive capacity and resilience in agricultural production, and • Design sustainable development in agricultural sector.			
Intended Learning Outcomes (ILOs): The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ Describe the effects of agriculture on environment, ▪ Appraise farming systems and their environmental significance, and ▪ Apply DPSIR and EIA tool to explain agri-environmental management.	Agriculture and Environment: Fundamental of environment and agriculture interrelationships, Understanding the effects of agriculture on environment, Describing farming systems and their environmental significance, Discussing organic cropping systems from ecological perspectives, DPSIR as a tool for agri-environmental indicators generation, Application of agri-environmental management approaches and tools: Environmental Impact Assessment (EIA).	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Assess sustainable agriculture (SA) and propose a model of SA, ▪ Differentiate climate change adaptation, coping and mitigation,	Sustainable Agriculture: Fundamentals of sustainable agriculture (SA); Developing indicators and understanding SA models; Measuring agricultural	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Illustrate vulnerability, adaptive capacity and resilience, and ▪ Implement climate-smart agriculture.	sustainability; Introduction to climate change; Understanding climate change adaptation; Vulnerability, adaptive capacity and resilience; Understanding climate-smart agriculture (CSA) and implementing CSA.		
▪ Critically analysis sustainable development concept, ▪ Apply sustainable agricultural development approach, and ▪ Propose good agricultural governance in different contexts.	Sustainable Development: Theoretical and conceptual explorations of sustainable development; Sustainable development- the context of Bangladesh; Fundamental of agricultural governance; Agricultural governance in the context of sustainable intensification of crop production, crop diversification and seed management	Lecture Discussion Multimedia presentation Assignment	Quiz/MCQ Short answer Essay type answer Report

Reference Books:

1. Warren, J. Lawson, C. and Belcher, K. 2008. The Agri-environment. Cambridge University Press, UK.
2. National Research Council, 2010. Toward Sustainable Agricultural Systems in the 21st Century. National Research Council, USA.
3. Brown, K. 2016. Resilience, development and global change. Routledge Publications, New York.
4. Dasgupta, S. and Roy, I. 2011. Good agricultural governance: A resource guide focused on smallholder crop production. FAO, Bangkok.
5. Schulz, R. W. 2011. Environmental Literacy in Science and Society: From Knowledge to Decisions. Cambridge University Press, UK.
6. OECD, 2001. Environmental Indicators for Agriculture (Vol. 3): Methods And Results
7. Henson, R. 2011. The Rough Guide to Climate Change. Penguin Books Ltd, 80 Strand, London.
8. FAO, 2013. Climate-smart agriculture: A sourcebook. FAO, Italy.
8. Adger, W. N., Lorenzoni I. and O'Brien, K. L. 2009. Adapting to climate change: thresholds, values, governance. Cambridge University Press, UK.
9. GIZ, 2014. The vulnerability sourcebook: concept and guidelines for standardised vulnerability assessments. GIZ, Bonn, Germany.

Course Code: AEIS 520	Credit Hour: 03	Semester: July-December	
Course Title : Development Communication (Elective)			
Rationale: This course is intended to provide an advanced understanding on communication for a new momentum and core areas of development.			
Course Outcomes: • Upgrade specialized knowledge and skills on communication for social change • Identify the newer approaches to development communication concepts, methods and techniques • Conceptualize communication strategies for development and • Impart skills on carrying out research, design, development, implementation, monitoring & evaluation of development communication interventions.			
Intended Learning Outcomes (ILOs) The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
▪ State development communication fully ▪ Discuss the values of development communication ▪ Apply the methods of development communication	Development Communication: Concept of development, introduction, definition (Quebral’s, Lent’s and Cybernatic) and meaning of development communication and its historical snippets; the key elements, values and methods used for development communication	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Identify the factors inhibiting development ▪ Cope up with barriers to development	Issues in Development: Self help groups, gender, women and development; climate change and development imperative, social problems, social mobility, problems of caste, ethnicity, and race; health, sanitation and development	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Describe the five areas of development communication practice ▪ Discuss the traits of a development	Development Communication Practice: Areas of practice, traits of the development communication experts,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

communication practitioner	types of development workers		
- Trace the historical links of development communication with the policy sciences - Define the policy sciences; - Describe the stakeholders of communication policy; and - Enumerate methods of policy analysis applicable to development.	Development Communication and the Policy Science: The policy science, dev com and the policy sciences, policy engagement in development communication, stakeholders in communication policy	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
- Have an understanding on different theories and models of development communication - Differentiate between diffusion and participatory model	Theoretical Approaches to Development Communication: Modernization, dependency and multiplicity theories; the diffusion and participatory models	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
Apply knowledge on communication research	Communication Research Methods: Definition and elements of research, research process, qualitative and quantitative research methods, tools of data collection, data analysis and report writing	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

Reference Books:

- Roy, G. L. (2006). Extension Communication and Management. Joy Prakashani. Calcutta, India.
- Prasad, K. (2009). Communication for Development: Reinventing Theory and Action. B. R. Publications, India.
- Ongkiko, I. V. C. And Flor, A. G. (2006). Introduction to Development Communication. UP Open University, Quezon City, Philippines.
- Servaes, J. (2008). Communication for Development and Social Change. Sage Publications Ltd. London, UK.
- Bhuiyan, M. H., Miah, M. A. M., Akanda, M. G. R. and Bashir, M. A. (2014). Agricultural Extension Education. G-Science Implementation and publication, Dhaka, Bangladesh.

Course Code: AEIS 521	Credit Hour: 03	Semester: July-December	
Course Title : ICTs for Development (Elective)			
Rationale: This course provides students on how and to what extent, ICTs can help to overcome inequalities and deliver development goals.			
Course Outcomes: After completing the course, students will be able to - Analyse the generic contribution of ICTs to international development, - Analyse the role of policy, strategy and operational interventions in promoting effective developmental use of ICTs, - Identify key roles, challenges and questions in the application of ICTs to specific development goals			
Intended Learning Outcomes (ILOs) The students will be able to	Course Content	Teaching-Learning Strategies	Assessment Strategies
- Define the whole and parts of ICT4D - Explain the connection between ICTs and development - Describe the key theories and concepts of relevance of ICT4D	ICTs for development: ICT system, Scope of ICTs, Development paradigms, MDGs/SDGs and ICTs, Design-reality gap model,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
- Explain the ICT4D value chain model - Categorise the technologies and human infrastructure of ICT4D - Identify key ICT4D stakeholders and policy components - Critique measure of the digital divide	Foundations of ICTs & development: ICT4D value chain, Technologies foundation of ICT4D, Ladder of ICT4D roles, Domains of ICT4D policy, social dimension of digital divide,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
- Explain the steps of ICT4D strategy - Describe good practice in ICT4D implementation - Identify key determines of ICT4D adoption and use - Summarise key ICT4D evaluation frameworks and issues,	Implementing ICT4D: Steps of ICT4D strategy, ITPOSMO checklist, ICT4D technical architecture, Principles for digital development, Diffusion of innovations attributes, ICT4D evaluation,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Explain key strategies and key foundations for economic growth ▪ Apply a model of ICT4D-enabled change to explain evidence on ICTs and economic growth	ICTs & economic growth: CIPSODAR model of key enterprise processes, ICT-enabled change, mobiles and cloth-weaving supply chain,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Categorise the relationship between ICTs and financial poverty eradication ▪ Outline the sustainable livelihoods framework ▪ Explain the impact of ICTs on gender quality	ICTs, poverty & livelihoods: ICTs causal impact on poverty, m-finance infrastructure, Sustainable Livelihoods Framework, Social capital,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Explain social and human development ▪ Categorise the relationship between ICTs and social development ▪ Outline the capabilities framework ▪ Summarise implications of the relation between ICTs and capabilities	ICTs & social development: Health system ICT applications, Information value chain, Education system ICT applications, ICTs and capabilities,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Explain governance related goals in development ▪ Utilise models to analyse the roles of ICTs in e-accountability and e-democracy initiatives ▪ Analyse the role of motivation and power in e-governance initiatives	e-Govt. & development: Good governance and development, e-services challenges, Informational model of the accountability cycle,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Describe the relationship between ICTs and environmental sustainability ▪ Categorise use of ICTs in disaster management	ICTs & environmental sustainability: Model of ICTs and environmental sustainability, Link between ICTs and pollution, Green ICT	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer

▪ Interpret analytical models of resilience and e-resilience	initiatives, e-waste management,		
▪ Identify key technologies trends of ICT4D ▪ Explain the technologies, innovations and challenges of Development 2.0.	The future of ICT4D: The future of “D”, Future of “ICT”, Development 2.0, Data-intensive development,	Lecture Discussion Multimedia presentation	Quiz/MCQ Short answer Essay type answer
▪ Analyse how ICTs can foster regional development	Assessment of a regional development goal/initiative using ICTs	Assignment preparation	Group presentation, Report.

Reference Books:

1. Heeks, R. 2017. Information and Communication Technology for Development (ICT4D). 1st Ed. Taylor & Francis Group