The course AEM 206: Project work (3 Credits) is compulsory for completing the Post Graduate Diploma in Agricultural Extension Management (PGDAEM). The candidates have to select any one topic from A, B, & C category (enclosed), within the purview of the programme AEM 206, based on their interest and its utility for the farming community and to their work situation in extension.

**Purpose of the project work:**

AEM 206: Project Work is intended to provide an opportunity to the candidate to field test the learnings related to extension management skill that he/she has acquired from PGDAEM programme. The overall objective of the PGDAEM is to equip the extension functionaries with latest tools and technologies for participatory decision making, provide insight into various extension models and developments in agricultural extension and enhance their techno-managerial competencies.

As part of the course requirement the candidates are suggested to choose a topic either from (A) Technologies related to respective departments, (B) Government schemes and (C) Extension management approaches/ skills. The topic chosen from A, B, & C category for the project work has to be planned as a field activity which the candidate has to implement in his/her own jurisdiction and report on the work done at the field level with the farmers / stake holders and its utility to the farming community. Report on the project work carries 100 marks.

**How to select the topic for the project work:**

**Criteria:**

1. Selected topic must have importance in the candidate’s area of posting and the agro ecological situation.

2. Topic related to A, B & C category has to be chosen. The enclosed list for all the three categories is only indicative.
3. The project work should not be based on the book reviews/reports alone. It has to be a field activity where farmers/livestock rearers/fishermen/others are involved as primary stakeholders.

4. The project work should be simple and easy to execute.

5. The project work should be within the control of the candidate in terms of time and jurisdiction (area of his/her operation)

6. Should not involve financial commitments

7. The candidates should communicate to their respective SAMETIs, the topic chosen for the project work within 15 days after completing the contact classes at SAMETI. Change / modification in the topic of the project work is permitted only once during the entire course period (i.e. one year).

8. SAMETIs should communicate to MANAGE, the list of topics selected by the candidates as per the A, B, & C categories within one month after the submission of the topics by the candidates.

9. It is recommended that 60% candidates may choose topics from A, 20% from B and the remaining 20% from C categories respectively.

10. The field activity has to be completed before the second semester exams so that the report can be submitted in time.

11. Photos of the field activities should be included in the project report.

**Endorsement of the project work**

12. The project work carried out by the regular departmental candidates at the field level should be endorsed by the immediate reporting officer of his/her department.

13. In case of private candidates, the project work should be endorsed by Project Director, ATMA or Scientist of KVK / SAUs / Faculty of Training / Research Institute of concerned department or Director, SAMETI.
The project report should be a minimum of 20 pages and should not exceed 50 pages. The candidates should refer various field study reports, annual reports, program evaluation reports, observations of experts and other sources relevant to the topic of the project.

**Structure of the project report**

1. **Introduction**
   
   Introduction to report deals with the following aspects:
   
   a. **Topic or subject matter**: This is normally expressed in terms of why the topic is of sufficient importance or significance to deserve detailed coverage in a report.
   
   b. **Objectives of the project**: what is the specific objective(s) of your field project (on the selected topic) and how it is going to be helpful to the farmer/ primary stakeholders.
   
   c. **Scope**: what are the possibilities of upscaling or expanding or replicating the project in your area of operation and other areas where it is applicable. What are the probable outcomes and benefits from the project to the target group i.e. farmers or primary stakeholders.

2. **Methodology for undertaking the project work**

   The methodology adopted for undertaking the project work should be fully explained. The report should contain the details such as location of the project work, sample size (target group- farmers/stakeholders), technologies involved/ schedules/ experiments, details of analysis (if any) for interpretation of the data, time frame of project activities and other details based on the nature of the project.

3. **Results and conclusion**

   A detail presentation of the findings of the project work with supporting data in the form of tables, charts, photographs etc. needs to be given. The results of the project work may be in the nature of e.g. increase in yield, efficient
water management, empowerment of the groups, increase in income, reduction in diseases, introduction and adoption of new technology, replication of innovations; accessibility, acceptability, coverage and impact of government scheme on the farmers; effectiveness of participatory approaches, farm schools, farmers producer companies, public private partnership, etc.

Based on the results and observations, the conclusions derived may be expressed in the form of lessons learnt, suggestions for improvement, specific recommendations for the future and limitations experienced.

**Guidelines for evaluation of project work:**

- Hand written project report is preferable.
- The project report carries 100 marks.
- The projects reports accompanied with the endorsement of the immediate reporting officer, in case of regular departmental candidates, should be evaluated. In case of private candidates, project reports accompanied with the endorsement of Project Director, ATMA or Scientist of KVK / SAUs / Faculty of Training / Research Institute of concerned department or Director, SAMETI should be evaluated.
- Evaluation should be done only by the identified panel of resource persons under A, B, C category of the topics.

Parameters for evaluation and awarding marks for the project report:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Marks</th>
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<tbody>
<tr>
<td>Introduction (which includes topic, objectives and scope)</td>
<td>15</td>
</tr>
<tr>
<td>Methodology (which includes selection of area for project work, sample size (farmers / other stakeholders), details of the field activity, interview schedules, analysis and interpretation of data etc.)</td>
<td>30</td>
</tr>
<tr>
<td>Results and conclusion</td>
<td>35</td>
</tr>
<tr>
<td>Photographs, diagrams, graphs etc.</td>
<td>10</td>
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</table>
Format for writing the project report  
(as per guidelines)  

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<td>Total:</td>
<td>100</td>
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**General tips for writing the project report:**

The report will have the following headings:

1. Cover sheet
2. Title page
3. Table of contents
4. Abstract
5. Introduction
   i. Topic or subject
   ii. Objectives of the project
   iii. Scope
6. Methodology for undertaking the project work
7. Results and Conclusion
8. References / Bibliography
9. Glossary (if needed)
10. Appendices

1. **Title page**
   - Title of the project
   - Name of the candidate
   - Enrollment No.
   - Name of the department
   - Year of submission

2. **Table of contents**
   - Should be accurate with clear layout
   - Should have section numbering along with page numbers
   - List of illustrations if applicable

3. **Abstract**
   - The abstract of a report include the following:
   - Providing the essence of the report in a few words
• Informative form, or descriptive form
• Impersonal tone
• Connected writing
• Length 150-250 words (for longer reports, 1/2-1 page single-spaced)
• Complete summary of key information

4. Body format
• Main headings indicating equal level of importance
• All subheadings relating to section heading
• Choice of levels indicating hierarchy of importance
• Hierarchy of importance shown by careful and consistent use of features such as capitals, different fonts, underlining, bold, italics
• Indenting
• Numbering/letter system
• Space between sections to enhance readability and layout
• When using charts, statistics and illustrations check for suitability, captions, reference in text and positioning
• Acknowledgement of all sources, including material referred to indirectly, direct quotations, copied diagrams, tables, statistics
• Ensure a systematic link between references in the text and the reference list and bibliography

5. Content
• Logical development of ideas from one section to another, and within each section
• Citing evidence
• Relevant to the topic selected with in the purview of the PGDAEM
• Should be objective and specific

6. Conclusion(s)
• It should be arising out of the facts and convincing
• There should be a substantial basis for the recommendations

7. Recommendations (if applicable)
• Based on the conclusions
• It should be practical and specific
• Well organized, with the most important first

8. References

The reference list is placed at the end of the report. It is arranged in alphabetical order of authors' surnames and chronologically for each author. The reference list includes only references cited in the text. The author's surname is placed first, immediately followed by the year of publication. The date is often placed in brackets. The title of the publication appears after the date followed by place of publication, then publisher. Use of commas, colons, full stops may be used as indicated below. Note that the titles of books, journals and other major works appear in italics (or are underlined when handwritten), while the titles of articles and smaller works which are found in larger works are placed in (usually single) quotation marks. The format of reference is given below.

• Beasley, V. (1964), Eureka !or how to be a successful student, Flinders University, Bedford Park, South Australia.
• Betts, K. and Seitz, A. (1986), Writing essays in the social sciences, Melbourne, Thomas Nelson.
• White, R.V. (1979a), Functional English, Sunbury-on-Thames, Nelson.
• White, R.V. (1979b), English for Academic Purposes, Sunbury-on-Thames, Nelson.

9. Glossary (if included)
• Should be arranged alphabetically

10. Appendix (appendices)
• Should be placed at the end of a report (if included)
• Should be arranged in the order referred to in the report
SUGGESTED SUBJECTS / TOPICS FOR PROJECT WORK UNDER PGDAEM

A - List of Technologies

Agriculture:

- Soil Health management - soil testing and soil test based recommendations to farmers
- Use of micronutrients for improving soil health
- Management technologies for problematic soil
- Alternative source of Inorganic fertilizers to sustain the soil and crop productivity (Green Manuring and Bio fertilizers)
- Integrated Nutrient Management (INM) for improving soil health and its productivity – NPMSH&F - Sub-Mission on Plant Protection included in NMAET
- Use of Bio-fertilizers
- Vermi - compost for soil fertility improvement
- Recycling of farm wastes and various composting techniques
- In situ- trash composting
- Nutrient deficiency symptoms of major crops of your Jurisdiction and remedial measures
- Organic Farming Cultivation Technologies
- Bio priming seed treatment for plant health management
- Varietal innovation for sustainable crop production
- Pulse production technologies
- Growth substances in enhancing crop productivity
- AESA based Plant health management
- Ecological engineering for pest management
- Use of Bio pesticides
- Disease Management - Sub-Mission on Plant Protection included in NMAET
- Integrated Pest Management - Sub-Mission on Plant Protection included in NMAET
- Integrated Weed Management - Sub-Mission on Plant Protection included in NMAET
- Mechanical Weed Control
- Pest, disease and Weed management in organic farming
- Integrated Farming System: Advantages, Components and Models
Water management in Dry land areas
Water conservation technologies and importance in Agriculture
Rain water harvesting technologies
Drought management including in-situ moisture conservation technologies
Importance of Watershed development in soil and water conservation
Major extreme events of your area and proposed disaster management techniques such as Flood management and mitigation technologies
System of Rice Intensification (SRI) Cultivation
Important post-harvest technologies to minimize the wastage of farm produce
Important dry land technologies suitable for your areas
Adaptation and Mitigation Technologies for Climate Change
Value addition
Mechanization
Irrigation management through Solar energy

Agricultural Engineering Technologies

Soil & water conservation technologies
- Micro irrigation
- Drainage technology
- Watershed development & water harvesting
- On farm irrigation structures such as pre-fabricated irrigation channels, diversion block, V notch etc
- Green house & protected cultivation
- Water use efficiency by different methods
- Impact of command areas on productivity of crops

Farm machinery
a. Tillage implements
b. Sowing implements
c. Weeding and intercultural implements
d. Plant protection equipment
e. Harvesting equipment
f. Miscellaneous equipment
Horticulture

- Green house cultivation
- Orchard management
- Canopy management in mango
- Shade net cultivation of vegetables with fertigation
- Soil Test Based Integrated Plant Nutrient Supply System (IPN SS)
- Crop diversification with oil palm
- Relay cropping in vegetable cultivation
- Rejuvenation of old and unproductive mango orchards
- Mango production and post-harvest management

Livestock and dairy

- Commercialized Goat milk based soap technologies
- **Technologies** for producing Cured and Smoked meat products
- **Technologies** for producing Shelf stable meat products
- Value added meat Product **Technologies**
- Emulsion based chicken products Emulsion based mutton products
- Male Kid Production System
- Optimum Floor Space and Ventilation for Goats ...
- Area Specific Mineral Mixture
- Tree leaves and spent grain based Feed blocks
- Silage making with agro-industrial by-products
- Vanaraja: A dual-purpose variety developed exclusively for free range poultry farming in rural and tribal areas.
- Gramapriya : A layer type variety developed for free range farming in rural and tribal areas.
- Feed supplements
- Enriched paddy straw blocks
- Artificial Insemination
- Milking machine
- Chaff cutting machine
Fisheries

- Technology of Extensive Shrimp Farming Systems.
- Technology of Semi-intensive Shrimp Farming Systems.
- Technology of Intensive Systems.
- Pen Culture Technology.
- Cage Culture Technology.
- Integrated Fish Farming.

Fish cum-Poultry Integration.

- Fish Cum –Duck Integration.
- Rice cum-fish Culture.
- Horticulture –Fish Integration.
- Seri –Fish Integration.
- Freshwater Pearl Culture
  - Feed formula, production process and feeding methods suitable for feeding in poly culture system of carps and prawn.
  - Feed supplement to enhance growth and survival of Indian major carps.
  - Comprehensive catfish hatchery.
1. **Agricultural Marketing**

   Central Sector Schemes

   - Integrated Scheme for Agricultural Marketing (ISAM) (Effective Since 01.04.2014)
   - Rural Godown Schemes (RGS)/GramminBhandaranYojana (GBY) (Effective till 31.03.2014)
   - Strengthening / Development of Agricultural Marketing Infrastructure, Grading & Standardization (AMIGS) (Effective till 31.03.2014)

2. **Cooperation**

   **NCDC Programme under Restructured Central Sector Scheme**

   The Government of India implements its cooperative development programmes through National Cooperative Development Corporation (NCDC). The programmes /schemes being implemented through NCDC are

   1. Integrated Cooperative Development Projects in selected districts,
   2. Assistance to cooperative marketing, processing and storage etc., programmes in cooperatively under-developed / least developed States/Union Territories, and
   3. Share capital participation in growers’/weavers’ cooperative spinning mills under the restructured central sector scheme.

3. **Credit**

   National Agricultural Insurance Scheme (NAIS)

   Pilot Modified National Agricultural Insurance Scheme (MNAIS)

   Pilot Coconut Palm Insurance Scheme (CPIS)

   Weather Based Crop Insurance Scheme (WBCIS)

   Coconut Palm Insurance Scheme (CPIS)
4. Crops:

- NFSM National Food Security Mission
- Additional Area Coverage of Pulses during Rabi/Summer 2013
- Bringing Green Revolution to Eastern India (BGREI)
- Initiative for Nutritional Security through Intensive Millets Promotion (INSIMP)
- Technology Mission on Cotton (TMC)
- Jute Technology Mission (JTM)

5. Extension

- Support to State Extension Programmes for Extension Reforms
- Agricultural Technology Management Agency (ATMA) Scheme
- Mass Media Support to Agricultural Extension
- The Central Sector Scheme ‘Mass Media Support to Agriculture Extension’
- Establishment of Agri-Clinic and Agri-Business Centre by Agriculture Graduates (ACABC)
- Central Sector Scheme on Extension Support to Central Institutions
- National Mission on Agricultural Extension and Technology (NMAET) (ATMA scheme)

6. Horticulture

- Mission for Integrated Development of Horticulture Schemes- MIDH
- National Horticultural Mission (NHM)
- Horticulture Mission for North East & Himalayan States (HMNEH) is a part of Mission for Integrated Development of Horticulture (MIDH) scheme
- National Bamboo Mission (NBM)
- National Horticulture Board (NHB) is implementing various schemes under Mission for Integrated Development of Horticulture (MIDH) in all States and UTs:
  - Commercial Horticulture Scheme
  - Cold Storage Scheme
Tech. Dev. Transfer Scheme

Nursery Rating System

National Cold Storage Database

Coconut Development Board CDB implementing various schemes under MIDH in all Coconut growing states in the country.

Schemes of Coconut Development Board

- Production and Distribution of Planting Material
- Expansion of Area under Coconut
- Integrated Farming for Productivity Improvement
- Technology Demonstration
- Market Promotion & Statistics
- Coconut Palm Insurance Scheme
- Information and Information Technology
- Human Resource Development
- Technology Mission on Coconut
- Replanting and Rejuvenation of Coconut Gardens

National Mission on Micro Irrigation (NMMI)

Central Institute of Horticulture (CIH), Dimapur, Nagaland

7. Information technology

National e-Governance Plan in Agriculture (NeGP-A):

Strengthening of IT Apparatus in Agriculture and Cooperation in the States and Union Territories (AGRISNET)

ICT (including NeGP-A) Guidelines

8. Integrated Nutrient Management

9. Mechanization and technology

Central Sector Scheme - Post Harvest Technology and Management
Central Sector Scheme - Promotion and Strengthening of Agriculture Mechanization through Training, Testing and Demonstration.

Vidarbha Intensive Irrigation Programme
Sub Mission on Agricultural Mechanization

10. NRM

- Programmes and Progress of Natural Resource Management Division
- National Mission for Sustainable Agriculture (NMSA)

11. Oilseeds

National Mission for Oilseeds and Oil Palm NMOOP
Mini Mission I (Oilseeds)
Mini Mission II (Oil Palm)
Mini Mission III (TBOs)

12. Plant protection

Strengthening & Modernization of Pest Management Approach in the Country (SMPMA)
Strengthening & Modernization of Plant Quarantine Facilities in India (SMPQF)
Monitoring of Pesticide Residues at National Level (MPRNL)
Plant protection scheme.

13. Rashtriya Krishi Vikas Yojana RKVY

RKVY Sub-Schemes:

- The Vegetable Initiative for Urban clusters
- Programme of Integrated development of 60,000 Pulses Villages in Rainfed Area
• Extending Green Revolution to eastern India
• Special Programme on Oil Palm Area Expansion (OPAE)
• Rainfed Area Development Programme (RADP)
• Accelerated Fodder Development Programme (AFDP)
• Initiative for Nutritional Security through Intensive Millets Promotion (INSIMP)
• Vidarbha Intensive Irrigation Development Programme (VIIDP)
• Saffron Mission
• National Mission for Protein Supplement (NMPS)

14. **Rainfed Farming Systems**

• National Watershed Development Project for Rainfed Areas (NWDPRA)
• Rainfed Area Development Programme (RADP)
• Accelerated Fodder Development Programme (AFDP)
• Watershed Development Fund (WDF)
• National Mission for Sustainable Agriculture (NMSA)

15. **Seeds**

Central Sector Scheme ‘Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds’

National Mission on Seeds
Technology mission on oilseeds, pulses and maize
Integrated Scheme on Oilseeds, Pulses, Oil Palm & Maize (ISOPOM)
Integrated Development of Tree Borne Oilseeds (TBO)
Seed village Programme

16. **NATIONAL RURAL EMPLOYMENT GUARANTEE ACT (NREGA)**

17. **LIST OF CENTRALLY SPONSORED SCHEMES.**

1. Assistance to Coop. Weaker Section.
2. Assistance to Women Cooperatives
3. Non-overdue Cover Scheme
4. Agri. Credit Stabilization Fund
5. Special Scheme for SC/ST
6. Integrated Cereal Development Programmes in Rice Based Cropping System Areas
7. Integrated Cereal Development Programmes in Wheat Based Cropping System Areas.
8. Integrated Cereal Development Programmes in Coarse Cereals Based Cropping System Areas.
9. Special Jute Development Programme
10. Sustainable Development of Sugarcane Based Cropping System Areas
11. Balanced & Integrated Use of Fertilizer
12. Promotion of Agricultural Mechanization among Small Farmers
13. Integrated Development of Tropical, Arid & Temperate Zone Fruits
15. Development of Commercial Floriculture
16. Development of Medicinal and Aromatic Plants
17. Development of Roots & Tuber Crops
18. Development of Cocoa & Cashew
19. Integrated Programmed for Development of Spices
20. Development of Mushroom
21. Use of Plastics in Agriculture
22. Bee-keeping
23. National Watershed Development Project for Rainfed Areas
25. Soil Conservation in Catchments of River Valley Projects & Flood Prone Rivers
26. Reclamation & Development of Alkali Soils
27. MeraGaonMera Gaurav
28. ARYA Attracting & Retaining Youth in Agriculture
29. KrishiDak – seed distribution scheme
List of Government of India schemes In Animal Husbandry, Dairying & Fisheries

Centrally Sponsored Schemes Livestock

- National Kamadhenu Breeding Centre
- National Livestock Mission NLM
- Integrated Development of Small Ruminants and Rabbits
- Conservation of Threatened Breeds
- Centrally Sponsored Livestock Insurance Scheme
- Fodder and Feeds Development Scheme
- Poultry Development Scheme
- Salvaging and Rearing of Male Buffalo calves scheme
- Establishment / Modernization of Rural Slaughter Houses
- Utilization of Fallen Animals
- Pig Development
- Livestock Health & Disease Control Scheme
- Directorate of Animal Health Scheme
- National Mission for Protein Supplements NMPS under RKVY
  - Scheme Livestock Health Disease Control
  - National Project for Cattle and Buffalo Breeding
  - Strengthening Infrastructure for Quality & Clean Milk Production
  - Low-input Technology birds
  - Assistance for Modernization of Slaughter Houses and Carcass Utilization Plants
  - Conservation of Threatened Breeds of Small Ruminants, Rabbits, Pigs, Pack Animals and Equines
  - Dairy Entrepreneurship Development Scheme
  - Conservation of threatened breeds of livestock
  - Poultry Venture Capital Fund
  - Integrated Sample Survey Scheme for Estimation of Major Livestock Products
  - National Programme for Prevention of Animal Diseases
  - Central Herd Registration Scheme
**Dairy Development (Central Sector) Schemes during 2013-14**

- Dairy Entrepreneurship Development Scheme
- National Dairy plan
- National Programme for Bovine breeding and dairy development NPBBDB
- **Intensive Dairy Development Programme (IDDPP)**
  - Central schemes on Fisheries (Under RKVY)
    - Development of Inland fisheries & Aquaculture
    - Development of Marine Fisheries, Infrastructure & Post Harvest Operations.
    - National Scheme of Welfare of Fishermen.
    - Strengthening of Database & Geographic Information System for Fisheries Sector.
    - National Fisheries Development Board (NFDB)
    - Strengthening of Database & GIS of Fisheries Sector.
    - Biometric ID cards
    - Registration of Fishing vessels
    - Suicide package scheme.
    - Fisheries Training and Extension
C- Extension Approaches & Methods:

1. Diffusion and adoption of farm innovation.
2. Audience response pattern through Farm Field Schools approach in terms of change in Knowledge, Skills and Attitudes (KSA).
3. Critical evaluation of new extension approaches i.e. ATMA.
5. Research - Extension - Farmer linkage - its weaknesses and need for strengthening the linkages.
7. Develop a communication strategy using traditional, conventional and modern media for diffusion of innovations?
8. Women are forced to take to Agriculture and Allied sectors for livelihoods which is termed as feminisation in agriculture. But apprehension is, their access to farm innovations is poor. Analyse and suggest a communication strategy to women in Agriculture?
9. Interpersonal and group communication behaviour of farmers under irrigated or command areas.
10. Performance assessment and implications of Extension system (s) operating in your state.
11. Capacity building of different stakeholders - farmers, extension functionaries, agro processors, marketers and other players.
12. A study on the time utilisation and decision making patterns of farm women in farm and home activities.
15. Develop a Micro plan of a selected village applying PRA techniques you have studied.
16. How do you conduct participatory planning and monitoring of a project implemented in your workplace?
17. Identify the technological needs of a given village using PRA techniques to develop people oriented programme?
18. Market led extension through group approaches would the farmers - Analyse its implications on empowerment of Farmers.
19. Time related PRA Methods - its application and implication in the process agricultural development.
20. Capacity building - its role in empowering the given clientele i.e. farmers and extension functionaries.

21. Develop a knowledge test (instrument to measure knowledge) taking hypothetical example of your field and activity with procedure?

22. Public - Private Partnerships in Agriculture and Allied Enterprises?

23. Develop an instrument to measure farm literacy levels

24. Role of public- Private - Panchayat Raj bodies to arrest migration and Sustainable Agriculture.

25. Identify a research problem of a village of your choice - develop the objectives, and variables for the study?


27. Supply Chain Management of Agricultural Produce – Opportunities and Possibilities.


29. Business to Entrepreneurship – most desired change in agri-business management to help farm producers and consumers.

30. Rural Marketing – A new horizon in agribusiness venture.


32. Human Aspects – the most important factor in Project Management in Agricultural Extension – An Unique Analysis

33. The Successful Projects are controlled through Net Works – An elaborate description.

34. Commercial and Financial Feasibility of an Agricultural Project – the most important determinant of its success.

35. Information and communication Technology (ICT) – A New Vista in Agricultural Extension Services in India.

36. Changing Scenario of Indian Agriculture through Introduction of ICT in its technology dissemination process.

37. E-extension – Paradigm shift in agricultural extension services reaching millions of farmers with ease and efficiency.