Far-Western University
Faculty of Agriculture
Tikapur, Kailali
Post: Assistant Professor
Course Curriculum of Entomology

1.0 Fundamentals of Entomology and Insect morphology

1.1 Introduction of Entomology and reasons of dominance of insect over other insects
1.2 Beneficial and harmful aspects of insects
1.3 Insect external morphology, appendages and modifications
1.4 Internal anatomy of insects: Insect digestive, reproductive, circulatory, excretory, nervous system
1.5 Insect metamorphosis
1.6 Insect identification taxonomic keys
1.7 Common inset orders and families with key morphological features
1.8 Economic importance under exopterygote and endoptergote category

2.0 Laboratory handling practices

2.1 Insect collection, handling and preservation practices
2.2 Insect rearing techniques in laboratory
2.3 Insect mass production techniques
2.4 Laboratory handling of beneficial microbes

3.0 Insect ecology aspects

3.1 Role of environmental factors (biotic and abiotic) on insect growth and development
3.2 Insect pest population dynamics and ecological role
3.3 Insect species interaction for competition, predation, parasitism and mutualisms
3.4 Food webs and trophic levels

4.0 Insect research and statistics

4.1 Basics of statistics
4.2 Field sampling techniques
4.3 Laboratory and field research designs
4.4 Qualitative and quantitative data observation techniques
4.5 Data transformation and ANOVA
4.6 Result interpretation and discussion

5.0 Pest and pesticide management national and international policies

5.1 National pesticide management policies

5.2 Plant protection act and regulations
5.3 Government polices to promote apiculture and sericulture
5.4 International Plant Protection Convention and Asia Pacific Plant Protection Commission

6.0 Agricultural insect pests of national importance and their integrated management

6.1 Major insect pest of cultivated agricultural crops such as cereals, vegetables, oil seed crops, cash crop and fruit crops
6.2 Vector insects and their integrated management
6.3 Common invasive insect pest of Nepal and their integrated management strategies
6.4 Reasons of pest outbreak of invasive species and mitigation strategies
6.5 Vertebrate threats in Nepal, their general biology and their potential management strategies
6.6 Snails and slugs' problem in agricultural crops and their integrated management

7.0 Insect of industrial importance in Nepal

7.1 Importance and scope of sericulture, apiculture and lac culture in Nepal
7.2 Life cycle and biology of honey bee and silkworm species
7.3 Honey bee products and their uses
7.4 Honeybee rearing technology
7.5 Honeybee hive and their various parts
7.6 Seasonal management of honey bee
7.7 Common honeybee insect pests and diseases and their integrated management
7.8 Role of honey bee in crop pollination, potential threats and conservation strategies
7.9 Silkworm rearing technology
7.10 Silkworm diseases and their integrated management
7.11 Mulberry cultivation practices in Nepal
7.12 Lac culture and their uses
7.13 Honey and silkworm trade issues in Nepal and overcome strategies
7.14 Insect as a food and feed or insect farming (black soldier fly and mealworms)

8.0 Integrated Pest Management and Pesticide Management

8.1 Basic concept and principles of integrated pest management

8.2 Strategies of integrated pest management includes cultural, mechanical, physical, biological, HPR, and chemical
8.3 Agroecological and habitat manipulation for pest management
8.4 Biological control agents and their role in pest management
8.5 Conservation of biological control

8.6 Common techniques of biological control agents
8.7 Mass production techniques of potential biological control agents
8.8 Resistance crop varieties in pest management
8.9 Pesticide management strategies
8.10 Role of integrated pest management for pesticide management
8.11 Pesticide classification, mode of action, type, formulation
8.12 Pesticide threats on food safety
8.13 Status of pesticide use in Nepal
8.14 Pesticide poisoning and management
8.15 Plant quarantine in Nepal, issues, challenges, importance and their role in Nepalese agriculture

9. Teaching methods

9.1 Pedagogy and pedagogical approaches and methods
9.2 Learner-centered pedagogy
9.3 Factors influencing the teaching and learning process
9.4 Lesion plan and the importance of lesion plan in teaching learning process
9.5 Role of ICT in teaching and learning process
9.6 Importance of curriculum

10. University related act, rules and structure

10.1 Vision and mission including organization structure of university
10.2 Constitutions, functions, duties and power of senate
10.3 Constitutions, functions and duties of academic council and faculty board
10.4 Constitutions, functions, duties and powers of dean, registrar and vice Chancellor
10.5 Formation of executive council, academic council and faculty board
10.6 Constitutions, Functions, duties service commission