National Chiayi University Syllabus <u>Graduate Institute of Agriculture</u>, Spring Semester, Academic Year 2010

| Course: Special Topics on Plant Molecular | Credit: 2 Hours:2 | |
|---|---------------------------------|--|
| Breeding | | |
| Class: ph.D Program | 🗌 Required, 🔳 Elective | |
| Instructor: Wen-Lii Huang | E-mail:wlhuang@mail.ncyu.edu.tw | |
| Office: A04A-404 | Office Hours: W1,7-8;W5,5-6 | |

I. Course Description:

Plant molecular breeding is one of the most important issues in plant biology. It including transgenic plant, marker-assisted selection, and molecular design breeding. This class will introduce the basic knowledge and application of plant molecular breeding. Especially focusing on newly tendency and topics reading and discussion for crop breeding.

II. Teaching Objectives:

This class will provide the basic knowledge and application of plant molecular breeding to students by teaching and paper reading. Besides, we focus on the training of discussion and oral presentation.

| Week | Date | Topic/Activity | Reading/Assignment | |
|------|------|---|---------------------------|--|
| 1 | | Introduction | | |
| 2 | | Definition of Plant Molecular Breeding | | |
| 3 | | Plant Transformation | | |
| 4 | | Classes and Application of Molecular Markers I | | |
| 5 | | Classes and Application of Molecular Markers I | | |
| 6 | | Molecular Markers-assisted Selection for Breeding I | | |
| 7 | | Molecular Markers-assisted Selection for Breeding II | | |
| 8 | | Molecular Design Breeding | | |
| 9 | | Exam. 1 | | |
| 10 | | Paper Reading I | | |
| 11 | | Paper Reading II | | |
| 12 | | Paper Reading III | | |
| 13 | | Paper Reading IV | | |

III. Class Schedule(Wednesday, 10:00-12:00 AM)

| 14 | Paper Reading V |
|----|---------------------------|
| 15 | Final Presentation |
| 16 | Final Presentation |
| 17 | Final Presentation |
| 18 | Final Presentation |
| | |

IV. Evaluation :

Paper Reading 50% Final Presentation 50%

V. References :

The Journal related to plant molecular biology and biotechnology.

Single space 、 Times New Roman 、 12 pt.