INTRODUCTION

The Faculty of Agriculture, Universitas Gadjah Mada was officially founded in 1949 which was previously called a Tertiary Institution of Agriculture established in 1946 at Klaten, Central Java. Initially, the Faculty of Agriculture UGM conducted an undergraduate (S1) program, whereas the doctoral program in Agricultural Science was centrally organized in the University. Since 1980 it has carried on a master progame (S2) comprising the study programs in Agronomy, Soil Science, Plant Pest Pathology, Plant Pathology, and Agricultural Economics. In 1999 the Faculty carried on the Study Program in Plant Breeding, which was previously an area of interest within the Study Program in Agronomy. The educational activities in the master progame (S2) are consisted courses and research. Doctoral programe (S3) in Agricultural Sciences has been organized since 1983 using by research system. In 1995/1996 the Program was changed a program characterized by the coursework study option (lecture classes, reading assignments, projects, essays) and research for the writing of a dissertation based on the Government Regulation No. 30 of 1990. In the period of 1993-2006 all the study programs were under the management of the Graduate School UGM. Since 2006, however, the Graduate Program in Agriculture has been under the management of the Faculty of Agriculture.

The existence of the Graduate Program will hopefully enable the Faculty of Agriculture to accelerate increase in master’s and doctor's degrees in Agricultural Sciences in Indonesia.
VISION

To become a graduate program that produces master's and doctor's degrees in research-based agricultural sciences, with brilliant carrier at national and global levels, and the development of science and technology oriented in the nation interest, society at large, and humankind based on Pancasila (State Ideology).

MISSIONS

The Graduate Program's missions are the possession of a set of attributes and qualifications as follows:

1. The spirit of Pancasila and high integrity.

2. Ability to develop new knowledge and technology in the field of agriculture through research, thereby producing creative, original, and reliable work.

3. Ability to solve scientific and technological problems in agriculture through interdisciplinary, multidisciplinary, and transdisciplinary approaches.

4. Ability to manage, lead, and develop research that is beneficial to the advancement of scientific knowledge and the good and welfare of mankind, and the capability to win national and international recognition.

5. Open-mindedness and responsiveness to science, technology, art, and social concerns.

6. Motivation and aspiration for continued intellectual growth as scholars.

7. Insight and wide perspective in their field and other related spheres.
The Graduate Program of the Faculty of Agriculture administers education for prospective masters and doctors in Agricultural Sciences comprising:

**The Master's Program, with the following Study Programs:**

1. Study Program in Agronomy
2. Study Program in Plant Breeding
3. Study Program Phytopathology
4. Study Program in Plant Pest Science
5. Study Program in Agricultural Economics
6. Study Program in Soil Science
7. Study Program in Agribusiness Management
8. Study Program in Fisheries Sciences

**The Doctoral Program, with the following Areas of Interest:**

1. Agronomy
2. Plant Breeding
3. Phytopathology
4. Plant Pest Science
5. Agricultural Economics
6. Soil Science
7. Agribusiness Management
8. Fisheries and Marine Sciences

The backbone of this program is a group of teaching staff comprising 26 permanent professors and 84 doctorate holders who are well qualified for the teaching and supervisory responsibilities. In addition, the support from the teaching staff of other Faculties within and outside UGM strengthen up and reinforces the implementation of the doctoral program in Agricultural sciences in a structured, programmed, and sustainable
According to rector regulations UGM No.11 Tahun 2016 about graduate education, the minimum required credit hours and the maximum lengths of study for the graduate program are as follows:

**The Master's Program**

40-50 cred.hrs scheduled for four semesters, which can be earned in less than four semesters or ten semesters at the maximum.

**The Doctoral Program**

1. For those with a master's degree in the same field, a minimum of 46-50 cred.hrs including the dissertation, which carries 30-36 cred.hrs. to be earned in a maximum of ten semesters.

2. College tuition as much as 12-20 cred

3. Research and dissertation writing as many as 30-36 cred including proposal writing dissertation research, seminars, exams dissertations and scientific publications

4. Scientific publications referred to in item 3 of at least one article derived from the results of a student dissertation research, which has been accepted by the international scientific publishers indexed

The study load is fulfilled by taking the required courses in each program/area of interest, and other courses with the approval of the supervisor.

**TEACHING AND RESEARCH FACILITIES**

Each study program has a laboratory to facilitate the teaching and research needs. In addition, joint-facilities are available:
1. Greenhouse (4 units).
2. Wire netting (4 units).
3. Tridharma Experimental Farm in Banguntapan with an area of three hectares.
4. Center for Agro-Technological Inovation (PIAT) in Kalitirto with an area of 35 hectares.
5. PT Pagilaran Plantation, Industry, Commerce and Consulting (Pagilaran Ltd) in Pekalongan, Central Java with an area of 1000 hectares of tea, cocoa, quinine, coffe, coconut, clove, and melinjo (Gnetum gnemon).
6. Research Station for Fisheries and Experimental Farm on Keburuhan Coast, Purworejo, Central Java with an area of 15 hectares.

ENROLLMENT REQUIREMENTS

1. Master's Program

Holder of bachelor degree (S1) in Agriculture or non-Agriculture study area with a minimum GPA of 2.75 (from a fully accredited institution/grade A) or 3.00 (from a partly accredited institution/grade B).

2. Doctoral Program

a. Holder of master's degree (S2) with a minimum GPA of 3.25 or a minimum GPA of 3.00 plus three scholarly publications in qualified journals, (National accredited or international Journal).

b. Holder of master's degree certification in non-Agriculture study area with a GPA above 3.50 or a minimum GPA of 3.25 plus three scholarly publications in qualified journals, (National accredited or international Journal).

ENROLLMENT SCHEDULE

Enrollment into the Master's and Doctoral Programs can be done either in April-June or October-December. More information can be found at http://um.ugm.ac.id.
EDUCATIONAL COSTS
The semestrial tuition fee for the Master's Program is IDR 9,000,000 (nine million rupiah)-IDR 9,500,000 (nine million five hundred thousand rupiah), whereas for the Doctoral Program it is IDR 12,000,000 (twelve million rupiah). Any possible change in the tuitional fee will be notified to each new student. Tuition under special cooperative arrangements will be charged in accordance with the amount set in the memorandum of agreement with relevant institutions.

APPLICATION PROCEDURES
The applicant completes the application form provided by downloading at um.ugm.ac.id. The application must specify the desired study program and be uploaded on the DA enrollment website (um.ugm.ac.id):
1. A copy of the bachelor degree (S1) cerification and transcript for the Master's Program, and copies of the first and master's degree certifications and transcripts for the Doctoral Program.
2. Letters of Recommendation from those who know the applicant's academic ability (supervisor, lecturer, superior).
3. A curriculum vitae and history of work experience (for working applicants).
4. A letter of permission from the workplace (for working applicants).
5. A statement on the sponsor/agency of financial resources for the study.
7. Results of English proficiency test (TOEFL) and Academic Potential Test (APT). APT score must be at least 450. The TOEFL score must be issued by an official institution as mentioned in the enrollment website um.ugm.ac.id. The requirements for the comprehensive examination (after completing the theory) are a minimum TOEFL score of 450 (or AcEPT score of 208) and an APT score of 500 for the Master's Program, and a minimum TOEFL score of 500 (AcEPT score of 268) and an APT score of 550 for the Doctoral Program.
8. Proof of credit transfer for payment of enrollment. Payment should be made to UGM Rector’s account No. 0039233894 at BNI 1946. In case of a change in the enrollment fee, applicants will be promptly notified.

9. Specifically for Doctoral Program applicants, additional requirements are as follows:
   a. A list of publications and activities in the past five years relevant to the chosen field of study.
   b. An outline research design (eight copies).

The enrollment procedures are specified in the stipulations at the enrollment website of GMU Graduate Program.

For further information, please contact:

Graduate Program

Faculty of Agriculture
Universitas Gadjah Mada
Jln. Flora, Bulaksumur, Yogyakarta
Phone: 0274-552706, 563062
Fax: 0274-552706
Email: pasca_faperta@ugm.ac.id
Website: http://faperta.ugm.ac.id
MASTER’S PROGRAM

Compulsory courses:

1. PNA 631 Advanced Agronomy 3 cred.hrs
2. PNA 620 Metabolism and Plant Growth Control 3 cred.hrs
3. PNA 622 Advanced Plant Ecology I 3 cred.hrs
4. PNA 780 Seminar 1 cred.hrs
5. PNA 790 Thesis 8-12 cred.hrs

Compulsory courses, appropriate for areas of interest:

1. Plant Production
   a. PNA 634 Production Science 3 cred.hrs
   b. PNA 632 Plant Science and Systems 3 cred.hrs
   c. PNA 620 Advanced Soil Fertility 3 cred.hrs

2. Weed Science
   a. PNA 641 Advanced Weed Science 3 cred.hrs
   b. PNA 722 Physiology of Herbicide 3 cred.hrs
   c. PNA 642 Biology and Weed Management 3 cred.hrs

3. Plant Physiology
   a. PNA 720 Environmental Physiology 3 cred.hrs
   b. PNA 621 Nutrition and Plant Growth 3 cred.hrs

Other courses offered by the Study Program:

1. PNA 601 Advanced Biochemistry 3 cred.hrs
2. PNA 611 Post-harvest Physiology 3 cred.hrs
3. PNA 623 Advanced Plant Ecology II 3 cred.hrs
4. PNA 661 Seed Science 3 cred.hrs
5. PNA 663 Special Problems in Agronomy 2 cred.hrs
6. PNA 741 Integrated Agricultural Systems 2 cred.hrs
DOCTORAL PROGRAM
Area of Interest: AGRONOMY

Compulsory courses:

1. PNA 811 Advanced Plant Growth 3 cred.hrs
2. PNA 812 Physiology of Environmental Stress 3 cred.hrs
3. PNA 847 Topics in Advanced Agronomy 3 cred.hrs
4. PNA 870 Analysis of Dissertation 3 cred.hrs
5. PNA 880 Seminar 1 cred.hrs
6. PNA 900 Dissertation 8-12 cred.hrs

Support Laboratories:

1. Laboratories for the Management of Plant Production with the following units:
   - Plant Management and Production
   - Tissue Culture
   - Horticulture
   - Botany
   - Plant Ecology
   - Seed Technology

Faculty Members:

1. Prof. Dr. Ir. Tohari, M.Sc.
2. Dr. Ir. Endang Sulistyaningsih, M.Sc.
3. Prof. Dr. Ir. Prapto Yudono, M.Sc.
4. Prof. Dr. Ir. Didik Indradewa, Dip.Agr.St.
5. Prof. Dr. Ir. Djoko Prajitno, M.Sc.
6. Dr. Eka Tarwaca Putra, SP., MP.
7. Prof. (Ret) Dr. Ir. A.T. Suyono
8. Dr. Ir. Budiastuti Kurniasih, M.Sc.
MASTER’S PROGRAM

Compulsory courses:

1. PNB 662  Quantitative Genetics  3 cred.hrs
2. PNB 663  Population Genetics  3 cred.hrs
3. PNB 664  Advanced Plant Improvement  3 cred.hrs
4. PNB 780  Seminar  1 cred.hrs
5. PNB 880  Thesis  28 -32 cred.hrs

Electives:

1. PNB 601  Cell Genetics  3 cred.hrs
2. PNB 665  Parasexual Plant Improvement  3 cred.hrs
3. PNB 666  Improvement of Pest Resilience and Disease  3 cred.hrs
4. PNB 667  Improvement of Environmental Stress Resilience  3 cred.hrs
5. PNB 668  Special Problems of Plant Improvement  2 cred.hrs
6. PNB 671  Correlation and Regression Analysis  3 cred.hrs
7. PNB 672  Incompletely Randomized Block Design  2 cred.hrs
DOCTORAL PROGRAM
Area of Interest: PLANT IMPROVEMENT

Compulsory courses:

1. PNB 861  Perspective in Plant Breeding  3 cred.hrs
2. PNB 869  Selected Topics in Plant Breeding  3 cred.hrs
3. PNB 870  Analysis of Dissertation  3 cred.hrs
4. PNB 880  Seminar  1 cred.hrs
5. PNB 900  Dissertation  28-32 cred.hrs

Support Laboratories:

1. Laboratories for Plant Production Management with the following units:
   · Plant Management and Production
   · Tissue Culture
   · Horticulture
   · Botany
   · Plant Ecology
   · Seed Technology

Faculty Members:

1. Prof. (Emer) Dr. Ir. Woerjono Mangoendidjojo, M.Sc.*
2. Prof. Dr. Ir. Prapto Yudono, M.Sc.
3. Dr. Ir. Nasrullah, M.Sc.*
4. Dr. Ir. Taryono, M.Sc.
5. Dr. Ir. Aziz Purwantoro, M.Sc.
6. Dr. Panjisakti Basunanda, SP., MP.
7. Dr. Rudi Hari Murti, SP., MP.
8. Dr. Rani Agustina, SP., MP.

*Impermanent faculty member
# MASTER’S PROGRAM

**Compulsory courses:**

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<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PNE 602</td>
<td>Micro-economics</td>
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<td>PNE 604</td>
<td>Macro-economics</td>
<td>3 cred. hrs</td>
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<tr>
<td>PNE 612</td>
<td>Econometrics</td>
<td>3 cred. hrs</td>
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<td>PNE 619</td>
<td>Mathematical Economics</td>
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<tr>
<td>PNE 780</td>
<td>Seminar</td>
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<tr>
<td>PNE 790</td>
<td>Thesis</td>
<td>8-12 cred. hrs</td>
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**Electives:**

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<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>PNE 605</td>
<td>Agribusiness Management</td>
<td>3 cred. hrs</td>
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<tr>
<td>PNE 609</td>
<td>Farming Operation Management</td>
<td>3 cred. hrs</td>
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<td>PNE 613</td>
<td>Agricultural Marketing</td>
<td>3 cred. hrs</td>
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<td>PNE 617</td>
<td>Agricultural Development</td>
<td>3 cred. hrs</td>
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<td>PNE 629</td>
<td>Natural Resource Economics</td>
<td>3 cred. hrs</td>
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<td>PNE 606</td>
<td>International Trade</td>
<td>3 cred. hrs</td>
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<td>PNE 608</td>
<td>Managerial Economics</td>
<td>3 cred. hrs</td>
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<td>PNE 618</td>
<td>Operations Research</td>
<td>3 cred. hrs</td>
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<td>PNE 620</td>
<td>Agroindustrial Economy</td>
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<td>PNE 624</td>
<td>Analysis of Agricultural Products Prices</td>
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<td>PNE 628</td>
<td>Human Resource Economics</td>
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<td>PNE 643</td>
<td>Regional Economy</td>
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<td>PNE 657</td>
<td>Economics of Agricultural Production</td>
<td>3 cred. hrs</td>
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<td>PNE 717</td>
<td>Agricultural Politics</td>
<td>3 cred. hrs</td>
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<tr>
<td>PNE 718</td>
<td>Agricultural Projects Planning and Evaluation</td>
<td>3 cred. hrs</td>
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DOCTORAL PROGRAM
Area of Interest: AGRICULTURAL ECONOMICS

Compulsory courses:

1. PNE 801 Advanced Micro-economics 3 cred.hrs
2. PNE 802 Advanced Macro-economics 3 cred.hrs
3. PNE 803 Advanced Econometrics 3 cred.hrs
4. PNE 804 Analysis of Dissertation on Agricultural Economics 3 cred.hrs
5. PNE 890 Seminar 2 cred.hrs
6. PNE 899 Dissertation 28-32 cred.hrs

Electives:

1. PNE 810 Special Topics in Farming Operation Management 3 cred.hrs
2. PNE 820 Special Topics in Agribusiness Management 3 cred.hrs
3. PNE 830 Special Topics in Agricultural International Trade 3 cred.hrs
4. PNE 840 Special Topics in Agricultural and Environmental Resources 3 cred.hrs
5. PNE 850 Special Topics in Agricultural Development 3 cred.hrs

Research Activities

Research Activities are focussed more on various problems in agricultural and rural development in Indonesia, which include the fulfilment of national food requirements, food security, the environment, sustainable agriculture, cooperatives, agroindustry and agribusiness. The Faculty of Agriculture also has research facilities, inter alia, a field laboratory, i.e. Tea and Cocoa Plantations of Pagilaran Ltd (1,000 ha), an Experimental Farm of Kalitirto (35 ha) and a library with a fine collection of various journals in the field of Agricultural Socio-economics.
Faculty Members

The Master's and Doctoral Programs in Agricultural Economics boast an array of faculty members with doctorate and professorship from the Faculty of Agriculture, Faculty of Forestry, Faculty of Agricultural Technology, Faculty of Animal Husbandry, and Faculty of Economics, Gadjah Mada University.

1. Prof. (Emer) Dr. Ir. Sri Widodo, M.Sc.
2. Prof. Dr. Ir. Masyhuri
3. Prof. Dr. Ir. Irham, M.Sc.
4. Prof. Dr. Ir. Dwidjono Hadidarwanto, MS.
5. Prof. Dr. Indra Bastian, MBA.
6. Dr. Ir. Slamet Hartono, SU., M.Sc.*
7. Dr. Ir. Suhatmini Hardyastuti, MS.
8. Dr. Ir. Any Suryantini, MM.
9. Dr. Jamhari, SP., MP.
10. Dr. Jangkung Handoyo Mulyo, SP., M.Ec.
11. Dr. Ir. Lestari Rahayu Waluyati, MP.

*impermanent faculty member
MASTER’S PROGRAM

Compulsory courses:

1. PNF 601 Advanced Plant Pathology 2 cred.hrs
2. PNF 602 Epidemiology of Plant Diseases 2 cred.hrs
3. PNF 603 Physiology of Plant Diseases 2 cred.hrs
4. PNF 660 Philosophy of Science and Research 2 cred.hrs
5. PNF 770 Special Problems of Plant Pathology 1-2 cred.hrs
6. PNF 780 Seminar 1 cred.hrs
7. PNF 790 Thesis 8-12 cred.hrs

Electives:

1. PNF 605 Diagnosis of Plant Diseases 3 cred.hrs
2. PNF 606 Abiotic Plant Diseases 2 cred.hrs
3. PNF 607 Soil-borne Plant Pathogens 2 cred.hrs
4. PNF 608 Insect-borne Plant Pathogens 2 cred.hrs
5. PNF 640 Advanced Plant Virology 3 cred.hrs
6. PNF 651 Plant Health Management 2 cred.hrs
7. PNF 652 Pesticide Management 2 cred.hrs
8. PNF 653 Plant Pathogen Integrated Control 2 cred.hrs
9. PNF 604 Post-harvest Pathology 2 cred.hrs
10. PNF 609 Molecular Plant Pathology 2 cred.hrs
11. PNF 610 Economics of Plant Pathology 2 cred.hrs
12. PNF 620 Advanced Mycology 3 cred.hrs
13. PNF 621 Physiology of Fungi 2 cred.hrs
14. PNF 630 Procaryote of Plant Pathogens 3 cred.hrs
15. PNF 650 Toxicology of Fungicide 3 cred.hrs

DOCTORAL PROGRAM
Area of Interest: PHYTOPATHOLOGY

Compulsory courses:
1. PNF 860 Philosophy of Science 2 cred.hrs
2. PNF 801 Genetics of Pathogen 2 cred.hrs
3. PNF 802 Molecular Biology 2 cred.hrs
4. PNF 803 Selected Topics in Phytopathology 2 cred.hrs
5. PNF 880 Seminar 1 cred.hrs
6. PNF 900 Dissertation 28 - 32 cred.hrs

Electives:
1. PNF 805 Tropical Plant Pathology 2 cred.hrs
2. PNF 896 Plant Resilience to Diseases 2 cred.hrs

Faculty Members:
1. Prof. Dr. Ir. Achmadi Priyatmojo, M.Sc.
2. Dr. Ir. Sedyo Hartono, MP.
3. Prof. Dr. Ir. Siti Subandiyah, M.Agr.Sc.
5. Dr. Ir. Sri Sualandari, SU.
6. Prof. Dr. Ir. Bambang Hadisutrisno, DAA.
7. Prof. Dr. Ir. Susamto Somowiyarjo, M.Sc.
8. Prof. Dr. Ir. Christanti Sumarmiyono, SU.
9. Dr. Tri Joko, SP., M.Sc.
10. Prof. Dr. Ir. Triwidodo Arwiyanto, M.Sc
11. Ani Widiastuti, SP., MP., Ph.D.
12. Dr. Suryanti, SP., MP.
MASTER’S PROGRAM

Compulsory courses:

1. PNH 601 Pest Ecology 2 cred.hrs
2. PNH 602 Physiology of Insects 3 cred.hrs
3. PNH 603 Advanced Pest Management 2 cred.hrs
4. PNH 604 Taxonomy of Adult Insects 3 cred.hrs
5. PNH 605 Toxicology of Insecticide 3 cred.hrs
6. PNH 606 Research Technique and Sampling 2 cred.hrs
7. PNH 770 Special Problems in Plant Pest Science 1-2 cred.hrs
8. PNH 611 Scientific Writting for Journal Publication 2 cred.hrs
9. PNH 780 Seminar 1 cred.hrs
10. PNH 790 Thesis 8-12 cred.hrs

Electives:

1. PNH 607 Taxonomy of Immature Insects 2 cred.hrs
2. PNH 608 Host Plant Resistens to Insects 2 cred.hrs
3. PNH 609 Advanced Biological Control 2 cred.hrs
4. PNH 610 Management of Plant Parasitic Nematodes 3 cred.hrs

DOCTORAL PROGRAM

Area of Interest: PLANT PEST SCIENCE

Compulsory courses:

1. PNH 851 Paradigms of Integrated Pest Management 2 cred.hrs
2. PNH 860 Philosophy of Science 2 cred.hrs
3. PNH 870 Selected Topics 2 cred.hrs
4. PNH 880 Seminar 1 cred.hr
5. PNH 890 Dissertation 28-32 cred.hrs
**Electives:**

1. PNH 852 Biotechnology in Pest Management  2 cred hrs
2. PNH 853 Management and System of Biological Control  2 cred hrs
3. PNH 854 Pesticide Risk Analysis  2 cred hrs

**Faculty Members:**

1. Prof. Dr. Edhi Martono
2. Prof. Dr. FX. Wagiman
3. Prof. Dr. Y. Andi Trisyono
4. Prof. Dr. Christanti Sumardiyo
5. Prof. Dr. Sri Noegrohati
6. Prof. (Emer) Dr. Woerjono Mangoendidjojo
7. Prof. Dr. Lasiyo
8. Dr. Arman Wijonarko
9. Dr. Nugroho Susetya Putra
10. Dr. Siwi Indarti
11. Dr. Witjaksono
12. Dr. Suputa
13. Dr. Tri Harjaka

**Laboratories:**

1. Laboratory of Plant Pest:  
   a. Laboratory of Entomology 
   b. Laboratory of Vetebrate Pest 
   c. Laboratory of Nematology 
2. Laboratory of Pest Control Technology:  
   a. Laboratory of Pesticide Toxicology 
   b. Laboratory of Biological Control 
   c. Laboratory of Plant Clinic 
3. Laboratory of Phytopathology:  
   a. Laboratory of Plant Virology 
   b. Laboratory of Agricultural Mycology 
   c. Laboratory of Plant Bacteriology 
   d. Laboratory of Integrated Plant Disease
MASTER’S PROGRAM

Compulsory courses:
1. PNT 600 Research Methodology 2 cred.hrs
2. PNT 612 Pedogenesis 2 cred.hrs
3. PNT 620 Soil Physics 2 cred.hrs
4. PNT 630 Soil Chemistry 3 cred.hrs
5. PNT 640 Biochemistry and BPO Biology 3 cred.hrs
6. PNT 650 Agrohydrology and Agroclimatology 2 cred.hrs
7. PNT 631 Soil, Water, and Plant Analysis 2 cred.hrs
8. PNT 700 Seminar 1 cred.hrs
9. PNT 710 Field Practice/Fieldwork 1 cred.hrs
10. PNT 790 Thesis 8-12 cred.hrs

Other courses offered by the Study Program:
1. PNT 610 Geology of Parental Materials 2 cred.hrs
2. PNT 611 Mineralogy of Clay 2 cred.hrs
3. PNT 613 Micromorphology of Soil 2 cred.hrs
4. PNT 614 Soil Classification 2 cred.hrs
5. PNT 615 Regional Pedology and Soil Survey 3 cred.hrs
6. PNT 616 Land Evaluation and Utilization 2 cred.hrs
7. PNT 617 Geomorphology and Land Analysis 2 cred.hrs
8. PNT 621 Soil Management 2 cred.hrs
9. PNT 622 Land Preservation and Reclamation 2 cred.hrs
10. PNT 632 Soil Fertility 2 cred.hrs
11. PNT 634 Special Problems of Fertilizers and Fertilizing 2 cred.hrs
12. PNT 635 Special Problems of Micro Nutrients 2 cred.hrs
13. PNT 636 Special Problems of Swamps 2 cred.hrs
14. PNT 637 Nutrient Management 2 cred.hrs
15. PNT 641 Soil Microbiology 2 cred.hrs
16. PNT 642 Soil Biology and Environment 2 cred.hrs
17. PNT 651 Irrigation and Drainage 2 cred.hrs
18. PNT 652 Agricultural Hydraulics 2 cred.hrs
19. PNT 653 Hydrology and Natural Resource Development 2 cred.hrs
DOCTORAL PROGRAM
Area of Interest: SOIL SCIENCE

Compulsory courses:
1. PNT 808 Close Analysis of Dissertation Proposal 0/2 cred.hrs
2. PNT 809 Seminar 1 cred.hrs
3. PNT 870 Dissertation 28-32 cred.hrs

Other courses offered by the Study Program:
1. PNT 801 Soil Genesis and Clearance 3 cred.hrs
2. PNT 802 Surface Chemistry of Soil Particles 3 cred.hrs
3. PNT 803 Advanced Soil Physics 3 cred.hrs
4. PNT 804 Perspective and Philosophy of Soil Science 2 cred.hrs
5. PNT 805 Applied Geochemistry 3 cred.hrs
6. PNT 806 Soil Biotechnology and Environment 3 cred.hrs
7. PNT 807 Interactions of Soil Mineral, Organic matter and Microorganisms 3 cred.hrs

Faculty Members:
1. Prof. Dr. Ir. Azwar Ma’as, M.Sc.
2. Prof. Dr. Ir. Supriyanto NotohadiSUPRINTO NOTOHADI, M.Sc.
3. Prof. Dr. Ir. Bambang Hendro Sunarminto, M.Sc.
4. Dr. Ir. Benito Heru Purwanto, MP., M.Sc.
5. Dr. Ir. Eko Hanudin, MP.
6. Dr. Ir. Sri Nuryani Hidayah Utami, MS., M.Sc.
7. Dr. Makruf Nurudin, SP., MP.
8. Dr. Cahyo Wulandari, SP., MP.

Impermanent Lecturers:
1. Prof. Dr. Ir. Bambang Djatmo Kertonegoro, M.Sc.
2. Dr. Ir. Dja’far Shiddieq, M.Sc.

Support Facilities:
1. General Soil Laboratory
2. Pedology Laboratory
3. Soil Chemistry Laboratory
4. Soil Physics Laboratory
MASTER’S PROGRAM

Pre - program courses (Matriculation):
1. Introduction to Economics (Microeconomics and Macroeconomics)
3. Quantitative Analysis (Mathematics and Statistics)
4. Fundamentals of Accounting
5. Introduction to Agribusiness

Compulsory courses:

Semester I
1. PNM 601 Economics for Managers 3 cred.hrs
2. PNM 602 Managerial Accounting 3 cred.hrs
3. PNM 603 Operations Research 3 cred.hrs
4. PNM 604 Agribusiness Systems 3 cred.hrs
5. PNM 605 Agribusiness Production Management 2 cred.hrs
Total credit hours 14 cred.hrs

Semester II
1. PNM 606 Human Resource Management 2 cred.hrs
2. PNM 607 Agribusiness Marketing Management 2 cred.hrs
3. PNM 608 Financial Management 2 cred.hrs
4. PNM 609 Agribusiness Investment Analysis 2 cred.hrs
5. PNM 611 Case of Crop and Horticulture Agribusiness * 2 cred.hrs
6. PNM 612 Case of Fisheries and Livestock Agribusiness * 2 cred.hrs
7. PNM 613 Case of Plantation Crops and Forestry * 2 cred.hrs
8. PNM 618 Work-Study 1 cred.hrs
Total credit hours 15 cred.hrs
Semester III
1. PNM 610 International Agribusiness 2 cred.hrs
2. PNM 614 Agribusiness Forecasts 2 cred.hrs
3. PNM 615 Agribusiness Strategic Management 2 cred.hrs
4. PNM 616 Agribusiness System Control Management 2 cred.hrs
5. PNM 619 Class Seminar ** 1 cred.hrs
6. PNM 617 Thesis (Seminar in Proposal and Comprehensive Examination) 2 cred.hrs

Total credit hours 12 cred.hrs

Semester IV
1. PNM 617 Thesis (Seminar in Results and Thesis Exam) 6 cred.hrs

Total credit hours (4 semesters) 43-47 cred.hrs

Note:
* Elective
** Supplementary

**DOCTORAL PROGRAM**

**Area of Interest: AGRIBUSINESS MANAGEMENT**

**Background:**

In keeping with the vision of Gadjah Mada University, the Doctoral Program in Agribusiness Management is expected to be able to be competitive nationally and internationally. This program is a structured program served by lecturers with advanced academic qualifications in teaching and research, and are academically reputable nationally and internationally. The Doctoral Program in Agribusiness Management is one that is based on research and teaching in efforts to upgrade managerial capacity and at the same time make a scientific contribution to the development of agribusiness management science. This program, on the one hand, has the traditional features of a doctoral program, i.e. mastery of theories and concepts as well as accuracy in thinking and analyzing: On the other hand, it also emphasizes the importance of the application of theories and results of analysis in order to solve practical problems encountered in the business world.
Vision
To become a leading and prominent doctoral program at national and international levels.

Missions
1. In Teaching
   To educate and prepare graduates at S3 level in the field of agribusiness management who are able to play an active role in agricultural development nationally and internationally.
2. In Research
   To carry out research and studies to develop new knowledge, concepts, and thought in the field of agribusiness that are needed in problem solving at the micro level (local, specific) and the macro level (national, international).
3. In Community Service
   To provide decision-makers or practitioners with the concept of innovation/reform with practical solutions in the field of agribusiness.

Aims:
1. To provide study opportunities at the doctoral level in agribusiness management for interested individuals who have experience and appropriate qualifications.
2. To motivate participants with knowledge of theories and concepts that are relevant to the aspects of agribusiness management.
3. To stimulate and encourage participants to respond creatively and innovatively to challenges in agribusiness.
4. To educate participants to be able to apply scientific methods in order to solve problems of agribusiness management and to communicate the results in the form of scientific work/scholarly publications.

Compulsory courses:

1. PNM  801  Philosophy of Science  
   2 cred. hrs
2. PNM  802  Advanced Managerial Economics  
   3 cred. hrs
3. PNM  803  Advanced Quantitative Method  
   3 cred. hrs
4. PNM  804  Advanced Agribusiness Management  
   3 cred. hrs
5. PNM  805  Analysis of Dissertation  
   3 cred. hrs
6. PNM  809  Seminar  
   2 cred. hrs
7. PNM  900  Dissertation  
   28-32 cred. hrs

Total Credit hours  44-48 cred. hrs
Other courses offered by the Study Program:

1. PNM 810 Special Topics in International Trade and Investment 3 cred.hrs
2. PNM 820 Special Topics in Human Resource Management 3 cred.hrs
3. PNM 830 Special Topics in Financial Management 3 cred.hrs
4. PNM 840 Special Topics in Agricultural Resource Management and Sustainable Environment 3 cred.hrs
5. Special Topics in Agricultural Marketing Management 3 cred.hrs
6. Special Topics in Public Policies on Agriculture & Agribusiness 3 cred.hrs

Faculty Members:

All the faculty members of the Doctoral Program in Agribusiness Management are doctorate holders. This stipulation is strictly enforced so as to maintain a maximum quality education. They are composed of senior lecturers and experts from the Faculty of Agriculture and other Faculties within UGM, the majority whom hold the title Professor.

1. Prof. (Emer) Dr. Ir. Sri Widodo, M.Sc.
2. Prof. (Ret) Dr. Ir. Kapti Rahayu Kuswanto *
3. Prof. Dr. Ir. Masyhuri
4. Prof. (Ret) Dr. Ir. Krishna Agung Santosa, M.Sc.*
5. Prof. Dr. Ir. Irwan, M.Sc.
6. Prof. Dr. Ir. Dwidjono Hadidarwanto, M.Sc.
7. Prof. Dr. Ir. Tohari, M.Sc.
8. Prof. Dr. Indra Bastian, MBA.
9. Dr. Ir. Slamet Hartono, SU., M.Sc.
10. Dr. Ir. Suhatmini Hardyaastuti, MS.
11. Dr. Ir. Any Suryantini, MM.

*impermanent faculty member
## MASTER’S PROGRAM

### Compulsory courses:

1. **PIP 5141** Tropical Aquatic Bioresources 3 cred.hrs
2. **PIP 5181** Aquatic Biochemistry 3 cred.hrs
3. **PIP 5171** Fisheries Economics 3 cred.hrs
4. **PIP 5221** Fisheries Biotechnology 3 cred.hrs
5. **PIP 5201** Research Methodology 3 cred.hrs
6. **PIP 6002** Seminar 2 cred.hrs
7. **PIP 6003** Thesis 8 - 12 cred.hrs
   
   **Total Credits** 26 cred.hrs

### Electives Course for Aquaculture

1. **PIP 5111** Design and Construction of Aquaculture 3 cred.hrs
2. **PIP 5122** Fish Reproduction Physiology 3 cred.hrs
3. **PIP 5131** Bacterial Fish Diseases 3 cred.hrs
4. **PIP 5132** Viral Fish Diseases 3 cred.hrs
5. **PIP 5212** Bio-Environmental Aquaculture 3 cred.hrs
   
   **Engineering**
6. **PIP 5251** Feed, Bioenergetics and Fish Growth 3 cred.hrs
7. **PIP 5233** Fish Immunology 3 cred.hrs
8. **PIP 5234** Fish and Environmental Health 3 cred.hrs
   
   **Management**

### Electives Course for Fisheries Resource Management

1. **PIP 5142** Fisheries Oceanography 3 cred.hrs
2. **PIP 5161** Fisheries Stock Assessment 3 cred.hrs
3. **PIP 5172** Fisheries Products Marketing 3 cred.hrs
4. **PIP 5173** Fisheries and Marine Policy 3 cred.hrs
5. **PIP 5262** Sustainable Fisheries Governance 3 cred.hrs
6. **PIP 5263** Conservation and Management of Aquatic Bioresources 3 cred.hrs
   
   **Coastal Community Organization and Institution**
7. **PIP 5274** Coastal Community Organization and Institution 3 cred.hrs

### Electives Course for Fish Processing Technology

1. **PIP 5191** Functional Properties of Fisheries Products 3 cred.hrs
2. **PIP 5192** Design of Fisheries Industry 3 cred.hrs
3. **PIP 5193** Quality Management of Fisheries Products 3 cred.hrs
4. **PIP 5281** Waste Control of Fisheries Industry 3 cred.hrs
5. **PIP 5282** Technology of Fermented Fish Products 3 cred.hrs
6. **PIP 5283** Molecular Technique in Fisheries Industry 3 cred.hrs
7. **PIP 5294** Fisheries Product Development 3 cred.hrs
Teaching Staff

The faculty members of the Study Program are alumni of various universities with excellent reputation in a variety of fields, which helps to maintain the standards of courses of instruction and research activities.

**Table 1. Teaching Staff of the Study Program**

<table>
<thead>
<tr>
<th>No</th>
<th>Names</th>
<th>Fields</th>
<th>Latest Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dr. Ir. Alim Isnansetyo, M.Sc.</td>
<td>Applied Biological Chemistry, Fish Diseases</td>
<td>The United Graduate School of Agricultural Sciences, Kagoshima Univ., Japan</td>
</tr>
<tr>
<td>2</td>
<td>Suadi, S.Pi., M.Sc., Ph.D.</td>
<td>Socioeconomics of Fisheries</td>
<td>Tokyo Univ. of Agriculture and Technology, Japan</td>
</tr>
<tr>
<td>3</td>
<td>Dr. Ir. Bambang Triyatmo, M.P.</td>
<td>Aquaculture Engineering</td>
<td>Gadjah Mada Univ.</td>
</tr>
<tr>
<td>4</td>
<td>Dr. Ir. Triyanto, M.Si.</td>
<td>Fish Diseases</td>
<td>The Univ. of Tokyo, Japan</td>
</tr>
<tr>
<td>5</td>
<td>Prof. Dr. Ir. Rustadi, M.Sc.</td>
<td>Aquaculture</td>
<td>Gadjah Mada Univ.</td>
</tr>
<tr>
<td>6</td>
<td>Dr. Indun Dewi Puspita, M.Sc.</td>
<td>Applied Microbiology</td>
<td>Hokkaido Univ., Japan</td>
</tr>
<tr>
<td>7</td>
<td>Prof. Dr. Ir. Ustadji, M.P.</td>
<td>Fish Processing Technology</td>
<td>Gangneung-Wonju National Univ., Korea</td>
</tr>
<tr>
<td>8</td>
<td>Dr. Amir Husni, S.Pi., M.P.</td>
<td>Natural Products, Fish Processing Technology</td>
<td>Gangneung-Wonju National Univ., Korea</td>
</tr>
<tr>
<td>9</td>
<td>Dr. Ir. Murwananto, M.Si.</td>
<td>Pest and Fish Diseases, Fisheries Biotechnology</td>
<td>Nara Institute of Science and Technology, Japan</td>
</tr>
<tr>
<td>10</td>
<td>Dr. Ir. Diumanto, M.Sc.</td>
<td>Fisheries Ecology, Ichtyoplankton</td>
<td>Ehime Univ., Japan</td>
</tr>
<tr>
<td>11</td>
<td>Ratih Ida Adhartini, S.Pi., M.Si., Ph.D.</td>
<td>Aquatic Resource Management</td>
<td>Gangneung-Wonju National Univ., Korea</td>
</tr>
<tr>
<td>12</td>
<td>Dr. Eko Setyobudi, S.Pi., M.Si.</td>
<td>Fisheries Biology</td>
<td>Gangneung-Wonju National Univ., Korea</td>
</tr>
<tr>
<td>13</td>
<td>Dr. Siti Ari Budhiyanti, S.TP., M.P.</td>
<td>Fish Processing Technology</td>
<td>Gadjah Mada Univ.</td>
</tr>
<tr>
<td>14</td>
<td>Dr. Ir. Latif Sahubawa, M.Si.</td>
<td>Fish Processing Technology</td>
<td>Gadjah Mada Univ.</td>
</tr>
<tr>
<td>15</td>
<td>Dr. Ir. Jangkung Handoyo Mulyo, M.Ec.</td>
<td>Agricultural Agribusiness</td>
<td>Kobe Univ., Japan</td>
</tr>
<tr>
<td>16</td>
<td>Subejo, S.Pi., M.Sc., Ph.D.</td>
<td>Agricultural Counseling and Communication</td>
<td>The Univ. of Tokyo, Japan</td>
</tr>
<tr>
<td>17</td>
<td>Dr. Ratih Idha Adarini, S.Pi., M.Si.</td>
<td>Phycology</td>
<td>Gangneung-Wonju National Univ., Korea</td>
</tr>
<tr>
<td>18</td>
<td>Dr. Nurfitrri Ekaranti, S.Pi., M.P.</td>
<td>Fish Processing</td>
<td>Uinveritas Gadjah Mada</td>
</tr>
<tr>
<td>19</td>
<td>Indah Istriqomah, S.Pi., M.Si., Ph.D.</td>
<td>Aquatic Biological Engineering; Fish Pathology</td>
<td>Hiroshima University</td>
</tr>
</tbody>
</table>
DOCTORAL PROGRAM
Area of Interest: FISHERIES AND MARINE SCIENCES

VISION
The S3 Study Program in Agricultural Sciences, UGM envisages a graduate study program in the fields of agriculture, fisheries and marine affairs based on superior research at national and global levels, oriented to the development of science and technology in the interests of the nation, for the sake of social welfare, and mankind based on Pancasila (State Ideology).

MISSIONS
1. To develop education in agriculture, fisheries and marine affairs at doctoral level based on research in order to produce highly competent graduates in advancing the scholarly paradigms of agriculture so as to bolster up agricultural development nationally and internationally.
2. To be engaged in strategic research that bolsters up graduate education at doctorate level in a sustainable way to solve problems in agriculture, fisheries and marine affairs and further develop science and technology.
3. To strengthen the institutional merit of the study program as it moves with the times and global trends, and to establish collaboration with related institutions both at home and abroad, and to help maintain close relations with alumni in a spirit of mutual support.

AIMS
To produce and equip graduates in the fields of agricultural science and fisheries who are able to: (1) form and expound theories/concepts, scientific knowledge and technology in agriculture, fisheries and marine affairs based on commodities and socioeconomic and ecological regions, (2) to manage, lead, and develop programs of research and community service, (3) to adopt an interdisciplinary approach in doing research work in the fields of agriculture, fisheries, and marine affairs.
Compulsory courses:
1. PNF 802 Philosophy of Science 2/0 cred.hrs
2. PNI 870 Analysis of Dissertation 3/0 cred.hrs
3. PNI 880 Seminar 2 cred.hrs
4. PNI 890 Dissertation 30 -36 cred.hrs

Electives:
1. PNI 806 Selected Topics in Fisheries and Marine Affairs 3/0 cred.hrs
2. PNI 821 Management of Sustainable Fisheries and Marine Resources 3/0 cred.hrs
3. PNI 811 Aquatic Organism Pathology 3/0 cred.hrs
4. PNI 822 Economics and Management of Fisheries Resources 3/0 cred.hrs
5. PNI 802 Fisheries and Marine Biotechnology 3/0 cred.hrs
6. PNI 812 Sustainable Aquaculture 3/0 cred.hrs
7. PNI 831 Fisheries Product Management 3/0 cred.hrs
8. PNI 803 Marine Natural Products 3/0 cred.hrs
9. PNI 832 Fuctional Nutrision of Aquatic Products 3/0 cred.hrs
10. Electives in other study programs/areas of interest 3/0 cred.hrs

Faculty Members:
1. Prof. Dr. Ir. Rustadi, M.Sc.
2. Prof. Dr. Lastyo, MM.
3. Dr. Ir. Triyanto, M.Si.
4. Dr. Ir. Alim Isnansetyo, M.Sc.
5. Dr. Amir Husni, S.Pi., MP.
6. Suadi, S.Pi., M.Sc., Ph.D.
7. Prof. Dr. Ir. Ustadi, MP.
8. Dr. Ir. Murwantoko, M.Si.
9. Dr. Ir. Djumanto, M. Sc.
10. Dr. Eko Setyobudi, S.Pi., M.Si.
11. Dr. Indun Dewi Puspita, M.Sc.
12. Dr. Ir. Jangkung Handoyo Mulyo, M.Ec.
13. Dr. Ir. Bambang Triyatmo, M.P.
15. Ir. Hery Saksono, M.A.
16. Dr. Indah Istriqomah, S.Pi., M.Si.
17. Dr., Ir., Latif Sahubawa, M.Si.
20. Dr. Noer Kasanah, Apt., M.Si., Ph.D.
21. Nurfitri Ekantri, S.Pi., M.P.
22. Prihati Siti Nugraheni, S.Pi., M.P.
23. Dr. R.A. Siti Ari Budhiyanti, S.T.P., M.P.
24. Dr. Ratih Ida Adharini, S.Pi., M.Si.
25. Senny Heimiati, S.Pi., M.Si.
26. Ir. Sukardi, M.P.
27. Ir. Supardjo Supardi Djasmani, S.U.
28. Susilo Budi Priyono, S.Pi., M.Si.
30. Wahdan Fitriya, S.Pi., M.Sc.
31. Susana Endah Rainawati, S.Pi., M.Si.
32. Faizal Rachman, S.Pi., M.Sc.
33. Dr.rer.nat. Riza Yuliratno Setiawan, S.Kes.
34. Ir. Sukirman Wirosaputro, M.S.
Graduate Program

Faculty of Agriculture
Universitas Gadjah Mada
Yogyakarta
Graduate Program

FACULTY OF AGRICULTURE
UNIVERSITAS GADJAH MADA
YOGYAKARTA