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**International Agriculture and Development (INTAD)**

**Dual-Title Graduate Degree**

Program Handbook

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INTAD Overview

Increasing numbers of employers are looking for graduates with international experiences and credentials. In response to this demand, a new dual-title degree program in International Agriculture and Development (INTAD) was developed in the College of Agricultural Sciences at Penn State. The new program provides graduate students with international perspectives and expertise to strengthen their primary graduate degree.

Graduate students must apply and be accepted into INTAD. The results will be a diploma that notes both the primary degree as well as the INTAD dual-title. Students can pursue M.S. and Ph.D. degrees. Upon graduation from the program, students will be better competitors for career opportunities working with international organizations, universities and research institutes, and international corporations.

Students already enrolled in the participating graduate programs in the College of Agricultural Sciences can apply to enroll in the dual-title degree program. Students will learn and develop skills through additional interdisciplinary core coursework and a broad range of supplemental elective courses. Regular opportunities will be available to interact with internationally accomplished faculty and peers in relevant fields.

Currently there are very few dual-title degree programs that aim to enrich the international education of graduate students. We are very pleased to be one of the first universities to give our students the opportunity to gain unique international perspectives and experiences through the INTAD dual-title degree program.

Benefits of the Program

**Students will benefit from the program through:**

* Knowledge, training, and academic achievement in their primary discipline.
* Understanding that agriculture has interlocking relationships with all sectors of the economy; functions within a socio-, cultural, economic and political milieu; and can be a vital resource to directly address issues of hunger, poverty, and health, throughout the world.
* A greater capacity to link knowledge with action to promote international agriculture and development.
* The global competency and skill set needed for leadership positions in research, nonprofit organizations, government agencies at all levels, and corporations.
* Intercultural communication skills, plus competence to work in diverse settings.
* A budding network of contacts in the academic and international development communities that will increase access to employment and international research opportunities and internships.
* Increased opportunities for publication in a growing field of professional journals.

**The INTAD dual-title degree will enable students to:**

* Describe and analyze changing global systems (political, economic, social, and environmental) that affect world food systems.
* Identify key social, cultural, economic and political influences and their impact on agriculture and  development in local, national and international contexts.
* Explain the history, impact, resources, and constraints of international agricultural institutions.
* Apply research, extension, education, and evaluation tools for both collaborative development and technology transfer/adaptation, particularly in resource-poor situations.
* Understand, apply, and develop teamwork and leadership skills designed for work within and across multicultural institutions.

Career Opportunities

The education provided through the INTAD graduate program allows students to earn a dual-title degree in both INTAD and their primary program. The dual-degree can increase students’ career opportunities by appealing to a wider range of prospective employers. INTAD enables students to develop expertise and skills, as well as acquire experience in international agriculture and development, all while maintaining professional identification with their primary discipline.

INTAD faculty members join well-known experts in the fields of agriculture, agricultural economics, policies and policy making, international trade, agricultural pest management and quarantine, and extension education.

Upon graduation from the program, students can find career opportunities with such international organizations as:

* United States Department of Agriculture: <http://www.usda.gov/wps/portal/usda/usdahome>
* USDA Foreign Agricultural Service: <http://www.fas.usda.gov/>
* Food and Agricultural Organization: <http://www.fao.org/>
* United Nations Development Programme: <http://www.beta.undp.org/undp/en/home.html>
* The World Bank: <http://www.worldbank.org/>
* UNESCO: <http://www.unesco.org/new/en/unesco/>
* Universities and research institutes
* International agricultural companies

Admission Requirements

The INTAD program does not require previous international experience. The program is appropriate for students who have an interest in working to solve international issues related to agriculture and development. The INTAD dual-title degree program is designed to help students gain international experience through coursework, research, and opportunities abroad offered by the College of Agricultural Sciences.

To pursue the INTAD dual-title degree, a student must first apply and be admitted to one of the participating graduate degree programs and the Graduate School at Penn State. Once accepted into the primary program, the student will then complete and submit their application materials to the INTAD Academic Program Committee.

**The application materials consist of the following:­­­­­**

* Application Form
* Statement of Purpose describing the student's interest in international agriculture and development, what they hope to accomplish by earning a dual-title degree, and how the dual-degree will help fulfill their professional goals
* Letter of support/reference from the student's INTAD advisor or another member of the INTAD faculty familiar with the dual-title program

[Access the INTAD application online](https://agsci.psu.edu/international/intad/admission-requirements)

Degree Requirements

Students electing this degree program through participating programs will earn a degree with a dual-title at the Master's or Ph.D. level. Students receive a degree that lists their major program and International Agriculture and Development (INTAD).

The International Agriculture and Development (INTAD) program is offered through the Departments of Agricultural Economics, Sociology, and Education, Entomology, Forest Resources, Environmental Systems Management , Plant Pathology and Environmental Microbiology, and Plant Sciences. The dual-title degree enables qualified students from the College of Agricultural Sciences (CAS) and other select programs at Penn State to combine their major degree with an internationally focused program of study to gain global competency skills and techniques for application of their discipline in a global environment.

The following graduate programs offer the dual-title in INTAD:

* M.S. and Ph.D. in Agricultural and Biological Engineering (ABENG)
* M.S. and Ph.D. in Agricultural and Environmental Plant Science (AEPS)
* M.S. and Ph.D. in BioRenewable Systems (BRS)
* M.S. and Ph.D. in Civil Engineering (CE)
* M.S. and Ph.D. in Ecology (ECLGY)
* M.S. and Ph.D. in Entomology (ENT)
* M.S. and Ph.D. in Education, Development, and Community Education (EDCE)
* M.S. and Ph.D. in Food Science (FDSC)
* M.S. and Ph.D. in Forest Resources (FORR)
* M.S. and Ph.D. in Plant Pathology (PPATH)
* M.S. and Ph.D. in Rural Sociology (RSOC)
* M.S. and Ph.D. in Soil Sciences (SOILS)

The INTAD dual-title graduate degree program is administered by the INTAD Academic Program Committee. The committee maintains the curriculum, identifies courses appropriate for the program, and develops and recommends policy and procedures for the program's operation to the dean of the College of Agricultural Sciences and the dean of the Graduate School. Members of the Graduate Faculty in INTAD also serve on master's and doctoral committees for students who are accepted into the dual-title program. This dual-title program enables students to learn about international agriculture while maintaining a close association with their primary area of interest in their home department.

Master’s Degree in INTAD

#### Course Requirements

Students are required to complete a minimum of 13 INTAD course credits (400, 500, or 800) for a dual-title master's degree. Ten credits will form the core curriculum:

| Required Courses | |  |
| --- | --- | --- |
| [INTAD 820](https://bulletins.psu.edu/search/?P=INTAD%20820) | International Agricultural Development Seminar | 3 |
| [RSOC 517](https://bulletins.psu.edu/search/?P=RSOC%20517) | International Rural Social Change | 3 |
| [INTAD 577](https://bulletins.psu.edu/search/?P=INTAD%20577) | Global Agricultural Systems | 3 |
| [INTAD 590](https://bulletins.psu.edu/search/?P=INTAD%20590) | Colloquium | 1 |
| Electives | |  |
| The remaining three credits must be taken as an internship or applied course/independent study with international development content. | | 3 |
| Total Credits | | 13 |

Final course selection is determined by the students, their major program advisers and their INTAD advisers. These advisers will discuss with the student a program of study that meets the student's career goals and that is in accord with the policies of the Graduate Council and the INTAD dual-title program. Some courses may satisfy both the major graduate program requirements and those of the INTAD dual-title program.

#### Thesis

Students pursuing a M.S. degree that requires a master's thesis, in addition to the 13 credits specified above, must write the thesis on a topic that reflects both their primary graduate program and the dual-title in INTAD. At least 6 thesis research credits (600 or 610) must be taken in the student’s primary graduate program.

All members of the student's committee for the dual-title master's degree will be members of the Graduate Faculty. The committee must include at least one Graduate Faculty member from INTAD.

Doctoral Degree in INTAD

Students admitted to the doctoral INTAD dual-title offering must exhibit high research competence, including ability to identify, conceptualize, and execute a significant research project that makes a significant addition to the body of knowledge in the field. Students also must be fluent in reading, writing, and speaking English.

#### Course Requirements

Students are required to complete a minimum of 19 INTAD credits for a dual-title Ph.D. degree. The 19 required credits must be at the 500 or 800 level. Thirteen credits will form the core curriculum:

| Required Courses | |  |
| --- | --- | --- |
| [INTAD 820](https://bulletins.psu.edu/search/?P=INTAD%20820) | International Agricultural Development Seminar | 3 |
| [RSOC 517](https://bulletins.psu.edu/search/?P=RSOC%20517) | International Rural Social Change | 3 |
| [INTAD 577](https://bulletins.psu.edu/search/?P=INTAD%20577) | Global Agricultural Systems | 3 |
| [AEE 525](https://bulletins.psu.edu/search/?P=AEE%20525) | Program Design and Delivery | 3 |
| [INTAD 590](https://bulletins.psu.edu/search/?P=INTAD%20590) | Colloquium | 1 |
| Electives | |  |
| Three credits must be taken as an internship or applied course/independent study with international development content. | | 3 |
| Three credits must be taken from among the INTAD electives (see list of approved courses on page 12) | | 3 |
| Total Credits | | 19 |

In addition, students will be encouraged to pursue proficiency in a language other than English, as appropriate.

Final course selection is determined by the students and their Ph.D. committees. The Ph.D. committee will discuss with the student a program of study that meets the student’s career goals and that is in accord with the policies of the Graduate Council and the INTAD dual-title program. Some courses may satisfy both the major graduate program requirements and those of the INTAD dual-title program. Permission from a student's Ph.D. committee, in consultation with the program chair, is required to substitute a 400-level course for a 500-level course.

#### Qualifying Examination

The qualifying examination committee for the dual-title Ph.D. degree must include at least one Graduate Faculty member from INTAD program. Faculty members who hold appointments in both programs’ Graduate Faculty may serve in a combined role. It is preferred that students take a single qualifying examination, containing elements of both the primary program and INTAD. However, in cases when students matriculate into a dual-title after they have already completed the primary program qualifying exam, a second qualifying exam may be taken for the dual title, according to policy GCAC-604 and the guidelines of the dual-title program.

Dual-title graduate degree students may require an additional semester to fulfill requirements for both areas of study and, therefore, the qualifying examination may be delayed one semester beyond the normal period allowable.

#### Committee Composition

In addition to the [general Graduate Council requirements for Ph.D. committees](http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/phd-dissertation-committee-formation/), the Ph.D. committee of an INTAD dual-title doctoral degree student must include at least one member of the INTAD Graduate Faculty. Faculty members who hold appointments in both programs’ Graduate Faculty may serve in a combined role. If the chair of the Ph.D. committee is not also a member of the Graduate Faculty in INTAD, the member of the committee representing INTAD must be appointed as co-chair.

#### Comprehensive Exam

At the end of their course work, students must pass a comprehensive examination that follows the guidelines established by the primary program and reflects both their primary program and the dual-title degree curriculum. International agriculture must be one of the key areas of the exam and the INTAD representative on the student’s Ph.D. committee must have input into the development of and participate in the evaluation of the comprehensive evaluation.

#### Dissertation and Dissertation Defense

Doctoral students enrolled in the dual-title degree program are required to write and orally defend a dissertation on a topic that reflects their original research and education in both their primary program and the INTAD dual-title program. The dissertation should contribute to the body of knowledge in international agriculture. A public oral presentation of the dissertation is required. The dissertation must be accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School, and the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree.

**Approved Elective Courses**

* ADTED/CIED 508: Globalization and Lifelong Learning (3)
* ADTED/CIED 509: Language, Literacy, Identity, and Culture in a Global Context (3)
* ADTED/CIED 562: Politics, Language, and Pedagogy: Applying Paulo Freire Today (3)
* EEFE 550: International Economic Development and Agriculture (3)
* AGBIO/FDSC 521: Food Defense: Prevention Planning for Food Processors (3)
* AGECO/ENT/CSIED 457: Principles of Integrated Pest Management (3)
* AYFCE 550: Program Development and Evaluation in Youth, Families, and Communities (3)
* AYFCE 555: Volunteer Program Management (3)
* AYFCE 845: Intergenerational Programs and Practices (3)
* BIO 415: Ecotoxicology (3)
* CED 410: The Global Seminar (3)
* CED 417: Power, Conflict, and Community Decision Making (3)
* CED 425: International Development, Renewable Resources, and the Environment (3)
* CEDEV 420: Women in Developing Countries (3)
* CIED 553: Educational Mobility in Comparative Perspective (3)
* ENT 497C: Medical Entomology
* ENT 530: Pollinator Biology (1)
* ENT 530: Seminar in Tropical Entomology (1)
* FDSC 515: Sensometrics - Applied Multivariate Analysis in Sensory & Food Science (3)
* FDSC 517: Microbial Genomic Epidemiology (3)
* FOR 418: Agroforestry: Science, Design, and Practice (3)
* FOR 488: International Forestry (3)
* GEOG 430: Human Use of the Environment (3)
* GEOG 439: Property and the Global Environment (3)
* GEOG 444: African Resources & Development (3)
* GEOG 530: Development, Governance, Justice (3)
* GEOG 530: Global Political Ecologies (3)
* GEOG 530: Power, Uncertainty and Health (3)
* INTAG 481: Problem Solving in Tropical Agriculture (3)
* PPEM 405: Microbe-Plant Interactions: Plant Disease and Biological Control (3)
* PPEM 454: Virus Ecology (3)
* RSOC 525: Fertility, Population & Development (3)
* RSOC 597: Race, Justice and Society (3)
* SOILS 502: Soil Properties and Functions (3)

Graduate Faculty

For the most updated version of the INTAD Graduate Faculty list, please consult the [INTAD Graduate Bulletin](https://secure.gradsch.psu.edu/gpms/index.cfm?searchType=fac&prog=INTAD).