

# INTERNATIONAL AGRICULTURE AND DEVELOPMENT

|                              |  |
|------------------------------|--|
| <b>Graduate Program Head</b> | Paul Esker   |
| <b>Program Code</b>          | INTAD  |
| <b>Campus(es)</b>            | University Park  |
| <b>Degrees Conferred</b>     | Dual-Title   |
| <b>The Graduate Faculty</b>  | View ( <a href="https://secure.gradsch.psu.edu/gpms/?searchType=fac&amp;prog=INTAD">https://secure.gradsch.psu.edu/gpms/?searchType=fac&amp;prog=INTAD</a> ) |

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 Agricultural and Extension Education (AEE)
- 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 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.

## Admission Requirements

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-titles/>).

Students must apply and be admitted to their primary graduate program and The Graduate School before they can apply for admission to the INTAD dual-title degree program. After admission to their primary program, students must apply for admission to and meet the admissions requirements of INTAD dual-title program. The student will submit an application to the INTAD Academic Program Committee. The application will include a written personal statement indicating the career goals they hope to accomplish by earning a dual-title degree. Doctoral students must be admitted into the dual-title degree program in INTAD no later than the end of the fourth semester (not counting summer semesters) of entry into the graduate major program.

## Degree Requirements

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-titles/>).

To qualify for the INTAD dual-title degree, students must satisfy the requirements of the primary graduate program in which they are enrolled. In addition, they must satisfy the minimum requirements of the INTAD dual-title degree specified here.

Graduates of the dual-title INTAD master's degree program who wish to pursue an INTAD doctoral degree must re-apply to the INTAD program for admission. INTAD master's degree credits may be carried over to the doctoral program. Six additional INTAD credits will be required. INTAD master's degree graduates who pursue an INTAD Ph.D. are required to take INTAD 820 a second time.

## Master's DegreeS

### 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:

| Code   | Title  | Credits   |
|--|--|-----------|
| <b>Required Courses</b>  |  |           |
| INTAD 820  | International Agricultural Development Seminar | 3         |
| RSOC 517   | International Rural Social Change              | 3         |
| INTAD 577  | Global Agricultural Systems                    | 3         |
| INTAD 590  | Colloquium                                     | 1         |
| <b>Electives</b>   |  |           |
| The remaining three credits must be taken as an internship or applied course/independent study with international development content. |  | 3         |
| <b>Total Credits</b>   |  | <b>13</b> |

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 Degrees

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:

| Code   | Title  | Credits   |
|--|--|-----------|
| <b>Required Courses</b>  |  |           |
| INTAD 820  | International Agricultural Development Seminar | 3         |
| RSOC 517   | International Rural Social Change              | 3         |
| INTAD 577  | Global Agricultural Systems                    | 3         |
| AEE 525  | Program Design and Delivery                    | 3         |
| INTAD 590  | Colloquium                                     | 1         |
| <b>Electives</b>   |  |           |
| 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.  |  | 3         |
| <b>Total Credits</b>   |  | <b>19</b> |

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.

## Minor

A graduate minor is available in any approved graduate major or dual-title program. The default requirements for a graduate minor are stated in Graduate Council policies listed under GCAC-600 Research Degree Policies (<https://gradschool.psu.edu/graduate-education-policies/>) and GCAC-700 Professional Degree Policies (<https://gradschool.psu.edu/graduate-education-policies/>), depending on the type of degree the student is pursuing:

- GCAC-611 Minor - Research Doctorate (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-611-minor-research-doctorate/>)
- GCAC-641 Minor - Research Master's (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-641-minor-research-masters/>)
- GCAC-709 Minor - Professional Doctorate (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-700/gcac-709-professional-doctoral-minor/>)
- GCAC-741 Minor - Professional Master's (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-700/gcac-741-masters-minor-professional/>)

## Student Aid

Graduate assistantships available to students in this program and other forms of student aid are described in the Tuition & Funding (<https://>

gradschool.psu.edu/graduate-funding/) section of The Graduate School's website. Students on graduate assistantships must adhere to the course load limits (<https://gradschool.psu.edu/graduate-education-policies/gsad/gsad-900/gsad-901-graduate-assistants/>) set by The Graduate School.

A limited number of Research Assistantships are also available through the College of Agricultural Sciences.

## Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

International Agricultural Development (INTAD) Course List (<https://bulletins.psu.edu/university-course-descriptions/graduate/intad/>)

## Learning Outcomes

1. KNOW – In addition to competency in the core discipline, INTAD graduates will demonstrate in-depth knowledge of political, economic, social and environmental components of global food systems.
2. THINK – In addition to competency in the core discipline, INTAD graduates will learn, critically evaluate and apply diverse perspectives to complex subjects within natural and human systems.
3. APPLY/CREATE – In addition to competency in the core discipline, INTAD graduates will apply knowledge and skills to implement sophisticated, appropriate and workable solutions to address complex global agricultural problems using interdisciplinary perspectives in both independent and collaborative situations.
4. COMMUNICATE – In addition to competency in the core discipline, INTAD graduates will be able to identify, organize and synthesize information from appropriate scholarly sources, engage in collaboration with diverse partners, and effectively communicate the critical issues of global food issues with diverse audiences.
5. PROFESSIONAL PRACTICE - In addition to competency in the core discipline, INTAD graduates will take informed and responsible action to address ethical, social and environmental challenges in global food systems and evaluate the local and broader consequences of individual and collective interventions.

## Contact

|  |  |
|--|--|
| <b>Campus</b>  | University Park  |
| <b>Graduate Program Head</b>   | Paul David Esker   |
| <b>Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)</b> | Leland Luther Glenna   |
| <b>Program Contact</b>   | Melanie Joy Miller Foster<br>106 Ag Admin<br>University Park PA 16802<br>mjm727@psu.edu<br>(814) 867-3831                                    |
| <b>Program Website</b>   | View ( <a href="http://agsci.psu.edu/international/graduatestudents/intad/">http://agsci.psu.edu/international/graduatestudents/intad/</a> ) |