



DIVISION OF EDUCATION

GRADUATE PROGRAM

DOCTORAL STUDIES GUIDE

TURRIALBA, COSTA RICA

2014

TABLE OF CONTENTS

	Page
FROM DEAN'S OFFICE OF THE GRADUATE SCHOOL.....	4
I THE PURPOSE OF THIS GUIDE.....	5
II ORGANIZATION OF CATIE.....	5
What is CATIE? A Brief History.....	5
Organizational Structure at CATIE.....	6
Graduate Education at CATIE.....	7
Research Activities.....	7
Research Facilities and Services.....	8
CATIE's Network in Latin America and the Caribbean.....	11
The Faculty.....	12
Visiting Professors and Scholars.....	12
The Doctoral Academic Committee.....	12
III PARTNER AND COOPERATIVE UNIVERSITIES.....	12
Partner Universities.....	13
Cooperating Universities in Europe, the United States and Latin America..	13
IV ADMISSIONS.....	13
V THE DOCTORAL PROGRAM AND IT'S REQUIREMENTS.....	15
Objective of the Program.....:	15
Doctoral Studies Areas.....	15
Options Available in Doctoral Studies.....	15
Differences Between North American (IU) and European (BU) Models	15
Language Options.....	16
Credit and Time Requirements.....	17
Definition of a Credit.....	17
CATIE Doctoral Options (in Spanish and English).....	17
Joint Doctoral Program with Bangor University.....	18
Joint Doctoral Program with the University of Idaho.....	19
Rules that Apply to all Options.....	19
Completing the Degree.....	20
Educational Leave.....	20
Progressing Through your Doctoral Program.....	21
1. Appointment of a Major Advisor and the Advisory Committee.....	21
2. The Individual Study Plan.....	22
3. The Preliminary or Candidacy Examination.....	22
4. The Research Plan.....	23
5. The Research Project Seminar.....	23
6. Final Dissertation Draft and Final Examination Date.....	24
7. Final Examination (Defense of the Dissertation).....	25
8. The Doctoral Dissertation.....	27

Petitions.....	27
Graduation Ceremony.....	27
Intellectual Property Rights.....	27
Scientific Misconduct.....	28
VI FINANCIAL ARRANGEMENTS.....	28
CATIE Doctoral Program.....	29
Joint Doctoral Program with Bangor University.....	29
Joint Doctoral Program with the University of Idaho.....	29
VII EXPENSES.....	29
Tuition and Other Costs at CATIE.....	29
Tuition and Expenses at Partnering and Cooperating Universities.....	29
VIII WORDS FOR THE WISE.....	30
IX REVIEW AND REVISION.....	30
X ANNEXES.....	30
Annex 1. Schedule for Filing Forms.....	31
Annex 2. Forms	31
DP-1 Appointment of Major Advisor and Doctoral Advisory Committee	32
DP-2 Individual Study Plan	33
DP-3 Changes to Study Plan or Advisory Committee	34
DP-4 Report of Preliminary Examination and Advancement to Candidacy	35
DP-5 Research Plan	36
DP-6 Report of Research Credits	37
DP-7A Final Defense Examination Program CATIE-IU or Ph.D. CATIE	38
DP-7B Final Defense Examination Program CATIE BU	39
DP-8 Dissertation Approval Form	40
DP-9 Request for Petitions	41
Annex 3. Sample Dissertation Title Page	42

FROM THE DEAN'S OFFICE OF THE GRADUATE SCHOOL

Dear applicant or CATIE Ph.D. student:

Congratulations for your decision to pursue your Ph.D. studies at CATIE.

It is important to note that CATIE has two joint doctoral programs; one is with Bangor University in the United Kingdom and the other with the University of Idaho in the United States. Should you decide to participate in one of these programs (a decision that should be made shortly after your arrival), you must apply to both CATIE and the partner institution for definitive admission into the joint program. Both institutions administer the joint programs and a doctoral certificate (Ph.D.) acknowledging both partners will be issued upon successful completion of your program.

In addition to these two joint programs, CATIE also offers its own doctoral program with options in English and Spanish in cooperation with a number of institutions in Europe, the United States, and Latin America. Cooperation within this program is sought to provide our students with a rich variety of academic options to fulfill their course requirements and oftentimes to complement the strengths of doctoral advisory committees. In these programs, only admission at CATIE is required. CATIE administers the program and issues the doctoral certificate (Ph.D.).

In this Guide, requirements for each of these doctoral programs are detailed for your information.

One aspect of paramount importance is that you identify sources of sufficient funding to cover the costs of your program before your arrival to CATIE. Funding must include, in addition to tuition and fees, the costs of international travel and living abroad, should you plan to participate in a joint program or take courses in one of our cooperating institutions. We will be happy to aid you in your search for financial support, should you be admitted into the doctoral program, but cannot guarantee the success of these efforts. We do inform students admitted into doctoral program, of funding opportunities when they arise and are seeking on a continuous basis, new sources of financial resources for our doctoral students.

For more information please consult the CATIE Graduate School web site (<http://posgrado.catie.ac.cr>) and please feel free to contact us at any time.

I. THE PURPOSE OF THIS GUIDE

The primary purpose of this Guide is to provide you, our doctoral student, with important information to orient your efforts in CATIE in an opportune fashion. The Guide has Internet links to additional important information. For example, the Guide contains important information related to our two joint doctoral programs with the University of Idaho and Bangor University, but it doesn't contain all of the details of these programs that are articulated in two collaborative agreements that can be found online at <http://posgrado.catie.ac.cr/posgrado/doctorados/>.

If you have additional questions that go beyond the Guide on any of the Ph.D. programs of CATIE, refer directly to the Graduate Program (posgrado.catie.ac.cr, Tel: 25582631) or visit our website web ([http://posgrado @ catie.ac.cr](http://posgrado@catie.ac.cr)). We also tried to not duplicate too much of the "Academic Rules and Procedures for the Doctoral Program" in this Guide, which are given to the student when he joined the program. Because the Guide is an informative tool, if there is a difference in information between the Guide and any of these three primary documents (agreement with Idaho, agreement with Bangor and Rules and Procedures of the Doctoral Program), the other documents are take precedence.

Cooperation with universities in Europe, the United States and Latin America is an important attribute of the doctoral program at CATIE. This Guide provides a brief overview of these partnerships and their requirements, but you will seek additional information once you decide to embark on one of these programs.

Finally, although the Guide provides some information about the facilities and services available to you at CATIE, we do not include all related details because of the volume of this information and the fact that much of this information is subject to change over time. For more in-depth information on particular facilities and services we suggest you visit the CATIE website (www.catie.ac.cr) or with the Graduate School upon your arrival in CATIE.

II. ORGANIZATION OF CATIE

What is CATIE? A Brief History

CATIE's origin dates back to October 7, 1942 when the Inter-American Institute for Agricultural Sciences (IICA) was founded. From its inception, the Institute's mandate has centered on research and education in agriculture and natural resources in the American tropics. The Graduate School began its operations in 1946.

In 1960, IICA's General Directorate was moved from Turrialba to San José, Costa Rica; research and teaching activities continued in Turrialba. *Agriculture*, from the beginning, implied a broad spectrum of activities and disciplines including crop production, livestock management, renewable natural resources and the social and economic dimensions of these fields of endeavor. Eventually, the Turrialba base of the Institute was transformed into a Center for Education and Research (CEI). Over a nine-year period, beginning in 1960, significant changes led to a strengthening of training opportunities for Latin American professionals, thereby laying the

groundwork for agricultural development in the region. In 1970, the Center for Education and Research was named the Tropical Center for Education and Research (CTEI).

The year 1973 was an important one for this institution. The *Centro Agronómico Tropical de Investigación y Enseñanza* (CATIE) was definitively established as an autonomous entity dedicated to research, higher education and outreach activities. Eighteen years later, in 1991, the governing body of CATIE was constituted to create a wholly independent Board of Directors made up of well-renowned individuals from throughout the world who represent “no one but themselves”, thereby providing autonomy and stability to the institution. Additionally, the Superior Council, comprised of Ministers from the Ministries of Agriculture or Environment of CATIE’s member countries, oversees the institution and ensures that the interests of their countries are represented in CATIE’s plans and activities.

Today, CATIE is an international, non-profit institution dedicated to research, higher education and outreach in agricultural sciences, natural resources and related topics in the American tropics. CATIE’s Mission is to “Increase sustainable and inclusive human well-being in Latin America and the Caribbean, promoting education, research and innovation for development, sustainable management of agriculture and conservation of natural resources.”

The graduate program at CATIE has a long and proud history. The M.Sc. program dates back to 1946 and has produced over 2000 graduates, the majority of whom have served the region and their professions in leadership positions. Three professional Master’s degrees have been successfully introduced at CATIE since 2007. In 1996, after a careful study, a doctoral program was initiated in partnership with leading institutions in the United States and Europe. In 2013, the program was expanded to include an option in Spanish with leading cooperating institutions in Latin America and Spain.

Organizational Structure at CATIE

A Director General and a Deputy Director General administer CATIE. The Director General is responsible to the Board of Directors. There are three interrelated divisions devoted to education, research and outreach: the Division of Education, the Division of Research and Development and the Division of Outreach and Development that oversees the work of the National Offices in a number of countries in the region. Apart from these divisions, the institution also has a commercial area under the Direction of Administration and Finance.

The Graduate Education Program is administered by the Director of the Education Division who also serves as the Dean of the Graduate School. He/she is responsible for the administration of graduate education and reports to the Director General on matters relating to graduate education.

The Dean of the Graduate School is the principal officer responsible for ensuring that graduate students are provided with an environment conducive to learning and personal growth. He/she also ensures that all institutional requirements for obtaining degrees are enforced. In addition, he/she is responsible that all principal activities carried out by the School comply with the rules of the institution.

Graduate Education at CATIE

The principal objective of CATIE's education program is to "Prepare leaders, scientists and managers capable of carrying out with success, their profession in difficult and changing environments, with a firm sense of social responsibility." The educational program offers opportunities to earn a Master of Science (M.Sc.) or the Doctor of Philosophy (Ph.D.) degree. In these cases, research is an integral part of the program. CATIE also offers professional Master's degrees, and graduate specializations and diplomas (<http://posgrado.catie.ac.cr>)

CATIE's M.Sc. Programs

- Agroforestry and Sustainable Agriculture
- Economics, Development and Climate Change
- Integrated Watershed Management
- Management and Conservation of Tropical Forests and Biodiversity

CATIE's Professional Master's Programs

- International Sustainable Tourism (with the University of North Texas)
- Development Practice
- Conservation Practice for Biodiversity

CATIE's Doctoral Program

The doctoral program is a cooperative program between CATIE and universities in the United States, Europe and Latin America. The language for the joint doctoral programs with Bangor University in the United Kingdom and the University of Idaho is English. CATIE also has its own doctoral program with both in-English and in-Spanish options. The latter still requires reading comprehension proficiency in English for non-native English speakers to enable our students selecting this option to access the enormous body of knowledge written in English in their field. Coursework for the doctoral program is carried out at the CATIE campus in Turrialba and at cooperating universities. The distribution of the coursework between CATIE and cooperating universities is explained in the **Credit and Time Requirements** section of this Guide.

Research Activities

Research at CATIE is one of its primary missions. Indeed CATIE has been for decades one of the most active organizations in the American tropics devoted to scientific research on tropical agriculture and the management and conservation of renewable natural resources. Doctoral research can be carried out in a wide host of topics including but not limited to the following:

- Agroforestry and sustainable agriculture
- Integrated watershed and water resource management
- Economics, development and climate change
- Management and conservation of tropical forests and biodiversity

- Ecosystem services in sustainable agriculture, agroforestry, and forestry systems
- Socio-economic and policy analysis of natural resources and agricultural production systems
- Governance and focus on livelihoods for natural resource management

Graduate students at CATIE are productive researchers and key partners to scientists in our Headquarters and throughout the region. Graduate research is generally carried out in conjunction with research and development initiatives in a wide host of Central and South America countries. Through our programs, students work closely with scientists, farmers, indigenous peoples, organizations, local and regional governments, communities, and local businesses to address questions of crucial importance for the region.

The institution takes pride not only in its graduates, but also in the technical and scientific information they help generate. This information constitutes a key input for decision and policy makers, farmers and other partners, representing an important contribution to the management and conservation of natural resources and sustainable agriculture in the Region. In this way, the Doctoral Program in CATIE stresses both scientific rigor and the applicability of the information generated. Research results are published in a variety of publications at CATIE and abroad. Doctoral students are expected to publish their results in international refereed scientific journals.

Research Facilities and Services

With over 70 years of experience in carrying out research and graduate studies, CATIE has developed a host of research facilities and services for its graduate students. Be sure you understand the policies and procedures related to the utilization of the facilities and services that are commonly accessed by doctoral students. It is important to remember that policies and procedures change from time to time. So, check with the appropriate individual or entity to make sure your information is up to date. Also, access CATIE's web site at www.catie.ac.cr where you can find a great deal of information about CATIE.

Orton Memorial Library

The Orton Memorial Library in the Division of Education at CATIE specializes in agriculture, forestry sciences, livestock, environment and related topics. The Inter-American Institute for Agricultural Sciences (IICA) founded this library in 1943. Today the library is jointly managed by CATIE and IICA (now called the Inter-American Institute for Agricultural Cooperation). There are a number of collections including more than 1,000,000 volumes of monographs and 11,000 titles of periodicals and serials. Approximately, 25% of the collection is unique in the world.

Beginning with March 2002 the Orton Memorial Library signed an agreement making a linkage with the University of Idaho Library. Students and professors linked to the joint doctoral program with the University of Idaho have authorized access through the Orton Library to the UI Library collection. Similar advantages are available to students and professors participating in the joint doctoral program with Bangor University. In addition, a growing number of on-line periodicals

are available to CATIE students and agreements with other institutions make it possible to access other information not available in the physical collections of the Orton Memorial Library.

One of the major purposes of the library is to assist the faculty and students at CATIE to secure the information and the literature they need in their education and research. It stores and makes available books, theses, journals, serials and some special collections of information and maps and videos. Among the services provided are: bibliographic references, inter-library loan of documents, publication sales, search of databases, reproduction of documents, and electronic searches. The library is open from 7:00 am to 6:00 p.m. Monday to Friday. For more information visit the library or contact:

Marta Abarca, Head
Phone: 506-2556-0501
Email: bibliot@catie.ac.cr

Biostatistics Unit

The Division of Education has an outstanding Biostatistics unit that teaches graduate statistics courses and consults with students on their research design and data analysis for their studies. For more information, visit the unit or contact:

Dr. Fernando Casanoves, Head
Phone: 506-2558-2206
Email: casanoves@catie.ac.cr

Biotechnology Laboratory

This laboratory has facilities and provides support to work in plant tissue culture (somatic embryogenesis, cell suspensions, and temporary immersion system), molecular markers, genetic mapping, genetic transformation and *in vitro* germplasm conservation (cryopreservation). An exciting variety of research projects are underway with forest species, cacao, coffee, plantain, banana and other commercial species.

Plant Genetics Resources Bank

This field collection occupies a 46-hectare area containing 71 families, 252 genera, 472 species and a total of 11,284 accessions (varieties). The gene bank is a depository for worldwide collections of cacao, coffee, tropical fruits (including bananas and plantains), peach palm, and others.

Seed Laboratory

This laboratory has facilities for short-term as well as long-term storage of seeds. At present, there are 29,000 samples from approximately 160 horticultural and forest species. It conserves worldwide collections of seeds of peppers, tomatoes and pumpkins. This laboratory offers a wide variety of services for the analysis of seeds based on international standards.

Forest Seed Bank

This bank is a self-sustainable unit within the CATIE Commercial Division, possessing a storage capacity exceeding 20 tons of tree seeds from a wide host of species. In addition to the collection and distribution of seed, the Forest Seed Bank carries out a tree improvement program for priority species and manages its own certified sources. In 2009, the Forest Seed Bank distributed more than 20 tons of seeds of over 50 tree species to destinations throughout the world. It has authorized distribution agencies in Mexico, Ecuador, Guatemala, Colombia and Bolivia. From 2010, the FSB has also initiated a program for production of plants from both seed and clonal material. Students can utilize the facilities, such as the storage, desiccation and germination chambers for seed-quality studies.

Soil Laboratory

This laboratory provides support for teaching and research activities. It carries out physical and chemical analyses of soils, plant tissue and water samples. The laboratory has an extensive physical plant divided into well-identified, specific areas allowing each step in the analysis to be performed reliably. There are modern extraction chambers, an atomic absorption spectrophotometer AAAnalysis 100, a U.V./V. spectrophotometer, nitrogen and carbon automatic analyzer, incubator, pH meter, conductivity meter and other basic analysis equipment.

Meteorological Stations

There are two meteorological stations at CATIE capable of gathering scientific data with electronic and mechanical instruments. These stations were established in 1942 and 1949, respectively and are used for teaching and research. Data are collected on precipitation, solar radiation, and relative humidity and air temperature. One is located on the CATIE campus in Turrialba and another at the La Lola Experimental Farm.

Experimental Farms and Forests

Nearly 1,000 hectares support the educational and research functions of CATIE in the Turrialba area. Within this area a large variety of crops, plant resources and areas devoted to animal husbandry can be found that are available for teaching and research activities. CATIE also carries out on-site research in a host of countries stretching from Chile to Mexico. In addition, CATIE has collaborated in the establishment of a number of permanent forest plots in several Central American countries and has established and managed a number of tree plantations on institutional properties.

Computer Services (Information Technology Area)

As part of the Direction of Administration and Finance, Information Technology provides information system services (including Internet and e-mail services), technical support and communication infrastructure to students and staff members both at Headquarters in Turrialba and in the National Offices in member countries. CATIE has a highly advanced platform that supports unified communications to permit agile services for distinct types of communications.

The platform is based on fiber optics, networks of broadband cable and wireless technology and symmetrical Internet of 20 Mbps per second. Administrative applications of the Graduate School and other services have been developed internally with standard software for client-server interface, Web and Oracle data base functions.

Communications and Policy Unit

This office provides the necessary services for publication of printed materials, from editing, design, illustrations and layout to coordination with printers. Printed materials include books, pamphlets, flyers, banners, conference proceedings, scientific series, institutional reports, teaching manuals, catalogs and items such as business cards and certificates, among others. Production of institutional promotional items such as t-shirts, hats, backpacks, cups, etc., are also designed and produced. Overseeing use of the logo also falls under the responsibility of the office; all uses, printed or otherwise, should be submitted to the office for prior approval.

In the area of public relations, the office publishes an online bimonthly bulletin, prepares and disseminates press releases, coordinates with members of the media for coverage of CATIE activities and oversees the CATIE Web Page. Protocol services related to events and visits by dignitaries and other important visitors are also available.

Other Facilities and Services

CATIE has other facilities and services that may be of interest to you:

- Printing and photo services
- Mail and banking services
- Health services
- The gymnasium and pool
- The International Club
- Housing
- School services for students with children
- Laundry facilities

CATIE's Network in Latin America and the Caribbean

Although located in Costa Rica, CATIE embraces 14 regular member countries from Ibero-America. CATIE has a mandate to respond to the research and educational needs of its member nations. Regular members countries are Belize, Bolivia, Colombia, Costa Rica, Dominican Republic, Guatemala, El Salvador, Honduras, Mexico, Nicaragua, Panamá, Paraguay, Venezuela, and the State of Acre in Brazil. In addition, the Inter-American Institute for Agricultural Cooperation (IICA) is a regular member. Spain is an affiliate member of CATIE. Research activities, technical cooperation, and development innovation are carried out in these countries and also in non-member countries. CATIE provides training and technical assistance to member countries and non-member countries, generally in the framework of research and development projects.

The Faculty

The faculty at CATIE is clearly its greatest asset. It is international in character with more than 30 different nationalities represented. Our faculty brings to this institution expertise gained in universities in the United States, Europe, and Latin America. A current list of the CATIE faculty and their areas of expertise can be found at <http://posgrado.catie.ac.cr/nuestros-profesores/>.

Along with regular CATIE faculty, there are a number of affiliate faculty members that provide support to CATIE. Affiliate faculty are not employed by CATIE, but have strong interest in its research programs, graduate education including participation on Doctoral Advisory Committees (DAC), outreach and other activities. For example, within the framework of the joint doctoral program with the University of Idaho, a number of professors from that institution are affiliate faculty of CATIE. Outside faculty, without affiliate status, also participate in graduate committees and sometimes cooperate as instructors in graduate courses at CATIE.

Visiting Professors and Scholars

Regularly, there are a number of visiting professors and scholars from the United States, Europe and other parts of the world at CATIE. These visitors may be spending a sabbatical here, for example on a scholarship or with the help of their university, or may be engaged in joint research or other scholarly activities with CATIE scientists. They often will welcome technical and scientific consultations and inquiries from graduate students and in some cases serve on student advisory committees. Check with your Major Advisor to find out if there is a visiting scholar who may be of assistance to you in your doctoral research.

The Doctoral Academic Committee

The Doctoral Academic Committee (CAD) has been established to provide support to the planning, administration, monitoring and supervision of the Doctoral Program in CATIE. At present the Dean who serves as President of the CAD, five faculty members and two doctoral-level student representatives (if possible one from each of the two joint doctoral programs) make up the CAD. The CAD also participates in the admission of doctoral students (minus the student representatives), in the search for funding to support doctoral students, addresses issues that arise with the joint doctoral programs, and participates in the periodic revision and update of this Guide and the “Academic Rules and Procedures for the Doctoral Program”. Student grievances related to the Doctoral Program are also addressed in the CAD. In general, this committee meets every two or three months. To bring items before the CAD, consult with the Dean of the Graduate School and, if appropriate, the item will be included in the agenda of the next CAD meeting.

III. PARTNER AND COOPERATIVE UNIVERSITIES

Given the structure of doctoral studies at CATIE, cooperation with universities in the United States, Europe and Latin America is an essential attribute of the program. This cooperation makes a large array of expertise and course opportunities available to the doctoral student at CATIE.

Partner Universities

The University of Idaho (United States) and Bangor University (United Kingdom) have official partnership agreements with CATIE, under which joint doctoral degrees are conferred to students who complete all necessary requirements. Under these programs, joint supervision is provided to the student during the entire doctoral program. Upon successful completion of the program, a joint Ph.D. certificate bearing the names of CATIE and the partner institution is issued.

Cooperating Universities in Europe, the United States, and Latin America

Agreements have also been signed with a host of other universities, which enable doctoral students in the CATIE Doctoral Program (not a joint program) to fulfill course requirements in cooperation with these institutions and/or take part in directed studies aimed at preparing them for their doctoral research. A contact person is identified at the cooperating institution that provides orientation and support to each student during studies abroad. Under CATIE's Doctoral Program, the Ph.D. certificate only bears the name of CATIE. For a current list of cooperating universities, please contact the Graduate School (posgrado@catie.ac.cr).

To register at a partner or cooperating university, there are often special requirements. Make sure that you are aware of these requirements *well in advance* and be sure that you will be ready to register at this university when you arrive. Some universities and specifically some faculties in the United States may require acceptable Graduate Record Exam (GRE) scores on file for admission. Once admitted to a partner or cooperating university, you will have to fully inform your major advisor(s) at all times of your plans and needs. The proven availability of adequate financial resources for travel costs, living expenses, tuition and fees, etc. will be required for authorization to study abroad.

IV. ADMISSIONS

For students applying for admissions to either of the two joint doctoral programs, the CATIE Graduate School strongly recommends applying simultaneously to CATIE and to the partnering university because applicants must meet admissions requirements at both universities.

All potential doctoral students will apply for admission at CATIE. To do so, a completed application form (<http://posgrado.catie.ac.cr/posgrado/admision/>) along with the following documents is required:

- a) A recent photograph, front, passport-sized, in digital format (jpg or bmp).
- b) A copy of the transcripts obtained from all the universities at which you have studied at the undergraduate and master's degree levels. Include information about the grading systems and, when possible, rankings at both levels (if not included with the transcripts). If you are admitted and can officially start the doctoral program, you must send by postal mail or bring with you original or certified copies of all transcripts issued by the universities you've attended.

- c) A copy of the diplomas (degrees) earned during undergraduate and master's degree studies. If you are admitted and can officially start the doctoral program, you must send by postal mail or bring with you a copy of each degree certified by the issuing university.
- d) A copy of certificates for any specialization courses, short courses, workshops, seminars, conferences, symposiums, and diplomas that you have completed.
- e) A copy of your curriculum vitae.
- f) A copy of the first page and the complete bibliographical reference for all publications and documents of projects in which you have participated.
- g) A copy of three letters of recommendation. One of these three must be from the Major Advisor during your master's degree studies.
- h) A summary of your master's thesis.
- i) A short proposal for your doctoral dissertation research interest (about two pages). This must define the research problem and its significance, the objectives, the hypotheses to be tested and the methodology to be used. Please indicate two other possible research topics. This document is used to help match you with a major advisor(s).
- j) A copy of TOEFL results for applicants from non-English speaking countries [minimum score of 79-80 iBT (550 paper-based) for the in-English CATIE and UI-CATIE doctoral programs] [minimum score of 83 iBT (560 paper-based) for BU-CATIE doctoral program]. For the BU-CATIE program only, the following minimum iBT scores for the four test areas are also required:
 - Reading 18
 - Listening 17
 - Speaking 20
 - Writing 18

For the in-Spanish option on the CATIE doctoral program, the only English requirement is a minimum TOEFL Reading iBT score of 20. A GRE score may be needed for applicants to collaborating US universities in the in-English, North American model option of the CATIE doctoral program.
- k) A letter of support from the institution where you work (optional).
- l) Payment of the US\$30.00 CATIE admission fee (please send a bank/cashiers check). You will pay any admissions fee required by a partner or cooperating university directly to them.

For University of Idaho admissions requirements please check:
<http://www.uiweb.uidaho.edu/catie/application.html>

For Bangor University admissions requirements please check:
<http://www.bangor.ac.uk/courses/postgrad/taught/applytaught.php.en>

V. THE DOCTORAL PROGRAM AND ITS REQUIREMENTS

Objective of the Program

A primary objective of the doctoral program at CATIE is to provide educational and research opportunities for the award of Doctor of Philosophy (Ph.D.) degree to qualified students in recognition of high achievement in scholarly and research activities. The commitment is to offer a program on par with the international standards of cooperating institutions.

Doctoral Study Areas

To ensure high quality in research, CATIE limits its program offerings to those areas of recognized excellence that can offer doctoral-level research opportunities. A number of topics were indicated earlier in this Guide as examples of areas in which doctoral studies can be pursued in CATIE. To provide further insights, titles of recent dissertations can be viewed in the Registrar's Office in the Graduate School.

An additional important point is that admission into any of the doctoral programs requires the identification of a scientist in CATIE willing to serve as a major advisor for the student. Doctoral studies are a long-term commitment and adequate support and supervision is vital.

Options Available in Doctoral Studies

Currently, CATIE offers six options for doctoral studies. These are:

1. Joint Doctoral Program with Bangor University (United Kingdom)
2. Joint Doctoral Program with the University of Idaho (United States)
3. CATIE Doctoral Program delivered in Spanish in cooperation with other universities, utilizing the North American model.
4. CATIE Doctoral Program delivered in English in cooperation with other universities, utilizing the North American model.
5. CATIE Doctoral Program delivered in Spanish in cooperation with other universities, utilizing the European model.
6. CATIE Doctoral Program delivered in English in cooperation with other universities, utilizing the European model.

Differences Between the North American (IU) and European Models (BU)

It becomes clear when reviewing the requirements of the joint doctoral programs with the University of Idaho (UI) and the Bangor University (BU) that they are quite distinct. The principal distinctions are as follows:

- a. In the UI-CATIE joint doctoral program a minimal number of credits of coursework is required, while in the BU-CATIE program coursework taken is flexible and is defined by the student with his/her major advisor(s)/Doctoral Advisory Committee (DAC).
- b. In the UI-CATIE program, the student's DAC is responsible for carrying out both the preliminary or candidacy exam and final dissertation defense, while in the BU-CATIE program the final defense is carried out by an external examiner and two internal examiners who have not been linked to the doctoral research.

Experience has shown that depending on the student and the source of financial support, there are cases when one of these two approaches is more appropriate. For example, a highly experienced researcher with a solid academic background, may not feel that a year of course work is the best use of his/her time and financial resources. In other cases, an entity providing a doctoral scholarship may be anxious to initiate research work, and might not look favorably on the idea of a student dedicating his/her first year to coursework. In these cases, the student will most likely opt for the European model. In contrast, a young, less-experienced student, or a student embarking on a new field of endeavor will most likely desire taking a year of coursework to ensure adequate academic strength in areas demanded by his/her doctoral research. In other cases, a student may feel more comfortable working closely with his/her major advisor(s)/DAC in all phases of the program, including the final defense. In these cases, the North American model will be a more appropriate option.

Whichever model is selected, the CATIE doctoral program options differ from the previous UI-CATIE and BU-CATIE options in the sense that they are not "joint programs." CATIE doctoral programs are strengthened by opportunities to take courses at specifically identified cooperating universities and at other institutions. Indeed if coursework is defined for the student, they must take at least 50% of the course credits outside CATIE. This policy was put into place to provide greater academic depth to the doctoral programs and to create programs on par with the international standards of cooperating institutions. Upon completion of all requirements, a certificate for the Ph.D. degree is issued bearing the name of CATIE only. Also in the doctoral program CATIE (in Spanish or English) student, whether they follow the European or American model, you can choose any of the options listed in paragraph b of the previous page.

Language Options

Due to the international character of the CATIE doctoral program and its cooperative nature with other universities in the United States, Europe, and Latin America the CATIE doctoral program has options in English and Spanish (although some courses may be taken in Spanish or another language of expertise in an in-English option and in English or another language of expertise in an in-Spanish option). Students in an in-English Ph.D. option will usually take courses in English at partner or cooperating universities in North America or Europe, if courses are prescribed in the Study Plan. The preliminary or candidacy examination, research plan, research seminar, dissertation, and dissertation defense will all be in English. Students in an in-Spanish option will usually take courses in Spanish at cooperating Spanish or Latin American universities if courses are prescribed in the Study Plan. The preliminary or candidacy examination, research plan, research seminar, dissertation, and dissertation defense will all be in Spanish.

Due to the location of CATIE in Costa Rica and the network of its operations in Latin America and the Caribbean, a working level in Spanish language is very useful and recommended for those doctoral students who come from non-Spanish speaking countries. This will facilitate communications and opportunities for interaction with different local and academic partners that will occur during the collection of data for the doctoral dissertation. Students can take Spanish courses as needed before arriving at CATIE to strengthen their Spanish. The majority of CATIE's courses are given in Spanish.

Credit and Time Requirements

Regardless of the Ph.D. program selected at CATIE, students *will spend at least three years enrolled full-time in courses and/or graduate research*. Major advisor(s)/Doctoral Advisory Committees (DAC) should keep this in mind when developing a challenging and appropriate study plan for the student. Students should seek funding (e.g., any combination of scholarships, fellowships, assistantships, loans, and/or personal resources) that is adequate to cover the complete program as developed with the major advisor(s)/DAC. A list of sources for graduate scholarships and fellowships is located on the Web at <http://posgrado.catie.ac.cr/>.

Definition of a Credit

A credit is a unit of valuation of student performance which is equivalent to 48 clock hours of work or effort devoted to academic activities (courses) or dissertation research that has been supervised and evaluated by the professor. In academic courses, student work includes a series of activities such as classes, field trips, fieldwork, homework, lab practices, case study analyses, review of literature, extra class group work or sessions, and preparation for tests. Research work includes planning the research project, compilation of data, data processing and analyses, consulting time with the major advisor(s) and DAC, writing of the thesis, preparation of presentations and seminars, elaboration of scientific and technical articles, and candidacy and degree examinations.

CATIE Doctoral Options (in Spanish and English)

The CATIE doctoral options require *a minimum of 100 trimester credits or equivalent (75 semester at a 4:3 conversion ratio) beyond the Master's degree*.

For in English or in-Spanish students on the North American model, *33 trimester credits or equivalent must be graduate level coursework (one full-time year of coursework)*. A minimum of *67 trimester credits or equivalent* will be earned in doctoral dissertation research (two full-time years of research, usually taken exclusively at CATIE). It is CATIE policy that at least 16 trimester credits (12 semester credits) of the coursework requirement be taken at an approved cooperating university in the language of the option (English, Spanish, or another language like Portuguese or French if the student has the needed proficiency). A greater proportion of coursework can be taken at the cooperating institution. This is exclusive of any other coursework that the student may have taken previously. It is possible that additional undergraduate courses may be required should a student have deficiencies in his/her academic formation. These courses generally *do not count* toward the minimum required 33 trimester credits of graduate coursework.

Your Study Plan *must* clearly illustrate that these requirements will be met in your proposed program.

For in-English or in-Spanish students on the European model, *all 100-trimester credits can be taken in doctoral dissertation research or some courses may be required in the Study Plan* if deemed appropriate by the major advisor/DAC. These courses must not exceed 15 trimester credits or equivalent.

These are minimums and the major advisor(s)/DAC often go beyond them in developing an appropriate and challenging Study Plan with the student.

Of the minimum three-year full-time (at least 32 hours dedicated per week) duration of the doctorate, no more than one year (the first) must be for courses and no less than two years dedicated to research. The candidacy examination and preparation and approval of the dissertation proposal must be realized before finishing the first year of the doctorate.

Details on the credit and time requirements for the CATIE doctoral program can be found in the “Academic Rules and Procedures for the Doctoral Program.

Joint Doctoral Program with Bangor University

The BU-CATIE joint doctoral program is on the European model and requires a minimum of three years of full-time intensive research. This enrollment is equivalent to *a minimum of 100 trimester credits or equivalent beyond the Master’s degree*.

Students usually start with an intensive research year at BU that includes a comprehensive course that covers research methods, statistics, health and safety in research, and research ethics. While at BU, they will also take the preliminary or candidacy examination, develop and give a seminar on their research proposal, conduct a thorough review of literature, and attend and write abstracts for five research seminars. Some courses beyond the comprehensive research course at Bangor may be required if deemed appropriate by the major advisors/DAC. The next two or more years will be devoted primarily to the research study in tropical Latin America.

These are minimums and the major advisors/DACs often go beyond them in developing an appropriate and challenging Study Plan with the student.

Of the minimum three-year full-time (at least 32 hours dedicated per week) duration of the doctorate, no more than one year (the first) must be for the required intensive research training at BU and any other courses deemed appropriate by the DAC, and no less than two years dedicated to research. The candidacy examination and preparation and approval of the dissertation proposal must be realized before finishing the first year of the doctorate.

Credit and time requirement details under the BU-CATIE joint doctoral program can be found in the “Collaboration Agreement: Joint Doctoral Program in Tropical Agriculture, Forestry, Agroforestry, and Conservation Biology” at <http://posgrado.catie.ac.cr/posgrado/doctorados/>. Students in this program are expected to read and be knowledgeable about this Collaboration Agreement.

Joint Doctoral Program with the University of Idaho

The UI-CATIE joint doctoral program is on the North American model and requires *a minimum of 102 trimester (68 semester at a conversion ratio of 3:2) credits or equivalent beyond the Master's degree.*

Courses are routinely taken at the UI and research credits are routinely taken at CATIE or a combination of CATIE UI. At least *24 semester (36 trimester) credits or equivalent must be graduate level coursework. A minimum of 55 trimester (38 semester) credits or equivalent* will be earned in doctoral dissertation research. When a student is full time at UI or CATIE they also pay for single credits at the other institution. These credits when added to the coursework and research credit minimums allow the student to achieve the 102 trimester (68 semester) credit minimum for graduation. No less than 33 semester (50 trimester) credits or equivalent can be taken at either institution. Because of the international nature of the program, students in the University of Idaho-CATIE joint doctoral program will spend at least 1.5 years of the three full-time years requirement internationally, usually devoted primarily to the research study in Latin America and the Caribbean (LAC) for North American students and a combination of the full-time coursework at UI and research study in Latin America and the Caribbean for LAC and other students.

These are minimums and the major advisors/DACs often go beyond them in developing an appropriate and challenging Study Plan with the student.

Credit and time requirement details under the UI-CATIE joint doctoral program can be found in the "Partnership Agreement on a Joint Doctoral Program between CATIE and the University of Idaho". Students in this program are expected to read and be knowledgeable about the Partnership Agreement.

Rules that Apply to all Options

No more than 10 trimester credits of thesis research can be reported per each trimester at CATIE (Form DP-6). Field research and development and defense of the dissertation will normally require a minimum of two years of full-time engagement but can take longer depending on the progress of the student. After a student's three-year minimum full-time requirement on the Study Plan is met, CATIE requires them to register and pay for at least one trimester of research credit for each trimester they are in one or more of the following categories:

1. Living in CATIE student housing.
2. Needing to be registered to comply with Immigration requirements.
3. Still actively involved with data collection, data analysis, dissertation writing and editing, and preparing for the defense of their dissertation.
4. In the trimester for defending their dissertation.
5. In a trimester subsequent to a successful dissertation defense where the student is still making changes to their dissertation (Form DP-8 has not been signed).

Special topics courses may be included in your Study Plan. However, you must abide by the limitations of the cooperating or partner institutions as to how many such credits you may

include. For those considering a CATIE doctoral degree (not a joint degree), generally no more than 6 trimester credits of special topics courses can be applied towards the 33-trimester credit minimum course requirement. This amount can be increased to a maximum of 16 trimester credits if the courses are approved for your Study Plan by your major advisor(s).

It is the policy of CATIE that you must maintain a grade point average of at least 3.2 (out of a 4-point scale or equivalent) or at least 80 (out of a 100-point scale or equivalent) to graduate.

Completing the Degree

Coursework should normally be completed over a 12-month period with field research, dissertation preparation and defense requiring a minimum of an additional 24 months. In practice, however, more time is often needed due to the international nature of the program. Therefore, students in any doctoral option have a maximum of four years to complete their doctoral program. Additionally, students can request through their major advisor to the Dean's Office (and the corresponding BU or UI offices, if applicable) for an extension of up to one year to complete their doctoral program if mitigating circumstances arise. This request should contain the reason(s) the student can't complete the degree within the four-year period and measures the student will take to ensure they are finished within the extension year. After five years, students are dropped from the doctoral program. Experience has shown the importance of developing a good Study Plan and discipline to see it through to fruition help students meet the program deadline.

Educational Leave

To avoid tuition and fee payments over a needed period of academic or research inactivity within the doctoral program, the student may request, through their major advisor(s), an Educational Leave (temporary cessation in their student status). To qualify for educational leave, it is absolutely necessary to have one or more strong and demonstrable extenuating circumstances that can be of two types: a) personal/family (e.g., a prolonged illness), b) an unforeseen economic situation making it impossible to meet doctoral program payments.

In addition, during educational leave the student can not live in CATIE student housing (CATIE students must be registered as such in order to live in student housing) or have an immigration status that requires them to be registered as a CATIE student.

For case a) indicated in the first paragraph, the maximum duration of an educational leave is two years and in case b) the maximum duration of an educational leaves is one year.

This period of temporary cessation of the doctoral program does not exempt the student from any of the requirements of their degree (academic, financial, or administrative). This means students who are granted an educational leave must still meet requirements such as a minimum of three years of full-time enrollment, the minimum number of credits established in their particular Ph.D. program, and comply with all of the established costs, among others, in order to successfully complete the Ph.D. program. In the written application for an educational leave, the student must include the reason for the request, the expected duration in the cessation in educational activity, and how the student plans to resume and continue his/her progress toward the degree when

finished with the leave period. The official application for an educational leave must be addressed to the Dean of the Graduate School at CATIE (and the appropriate office at the partner university, if applicable).

Progressing Through Your Doctoral Program

Note: Partner universities in the joint doctoral programs (UI and BU) may have their own forms to complete as a student progresses through their degree. It is the responsibility of the student to also become knowledgeable of and complete any requirements specific to their particular partner university.

1. Appointment of a Major Advisor(s) and the Doctoral Advisory Committee (DAC)

Your acceptance into a doctoral program requires that a person willing to serve as your major advisor or supervisor has been identified and appointed at CATIE and in the partner university in case of a joint program. It is likely that this appointment will be based on the topic that you have selected for your doctoral research.

For students entering a CATIE doctoral program, in addition to your major advisor from CATIE, you must select an additional minimum of two and maximum of three other professors to serve on your Doctoral Advisory Committee (DAC). They can be from CATIE, the institution where courses are to be taken, or another organization. One of the additional DAC members can also serve as co-major advisor in a CATIE doctoral program.

For students entering one of the two joint doctoral programs, in addition to your major advisor from CATIE, you must select a co-major advisor at the partner university. These two co-major advisors and an additional minimum of two other professors will conform your DAC. It is recommended that at least one committee member from each institution round out the DAC.

Members of the student's DAC must be professors who hold the degree of Ph.D. and can provide the assistance you require during your doctoral studies and research. You and your major advisor(s) should hold discussions and decide *together* on the make up of your DAC. In selecting members, one with considerable knowledge on research design and methodology and statistical analysis is highly recommended to ensure you have adequate support and orientation in these aspects.

Your major advisor(s) serve as the chairs of your DAC and are your primary contact(s) throughout the duration of your doctoral studies.

Once you and your major advisor(s) have decided on the make up of your DAC, a special form (**Form DP-1**) is to be obtained from the Graduate School (*see the end of this Guide for sample forms*). Once completed, the signatures of all committee members and the Dean of the Graduate School are to be obtained on this form. The original copy of the completed form is to be filed with the Graduate School. You and your major advisor(s) should each retain a copy. It is expected that you decide on the conformation of your DAC within the first six months of your program.

2. The Individual Study Plan

Your Study Plan is a very important *official* document specifying the courses you will take and other program details essential to *meeting degree requirements*. It is your “road map” that will guide you on your journey to successful program completion and graduation. It is prepared only after in-depth discussions with your major advisor(s), and in some cases, DAC members. The Study Plan takes into consideration your career objectives, CATIE’s doctoral research opportunities, institutional requirements, and possibly funding opportunities. The study plan also sets out the timeframe you hope to follow during your doctoral program. Courses and other support deemed necessary at partner or cooperating universities in the U.S., Europe, or Latin America should be included in the Plan.

Once the Study Plan is *drafted* between you and your major advisor(s), it is submitted to the other members of your DAC. Once finalized and approved, the Study Plan Form (**Form DP-2**), available at the Graduate School, is to be completed and properly signed, including the signature of the Dean of the Graduate School. The original copy is filed with the Graduate School and copies are provided to all members of your DAC. You are expected to develop your Study Plan during the first trimester of your program or shortly thereafter depending on when you finalize the conformation of your DAC.

Changes to the Study Plan (for legitimate reasons) are made *only* with the approval of your major advisor(s) and the Dean of the Graduate School with a special form (**Form DP-3**) signed by you, your major advisor(s) and the Dean of the Graduate School and filed with the Graduate School.

3. The Preliminary or Candidacy Examination

For students on the North American model, this examination is scheduled after you have completed most (*at least 18 semester credits or equivalent*) or all of your full-time coursework. For students on the European model it is scheduled during the first year of study. It is designed to assess your ability to draw on and synthesize the various bodies of knowledge that you have studied during coursework and/or in preparation for your research and determine your readiness to carry out doctoral level research. The examination has two parts: a written and an oral portion. Questions are supplied by all members of your DAC.

This is a significant examination. The written portion may take several days to complete. Methodologies vary depending on the preferences of the major advisor(s) and committee members. At one extreme, it may be closed book and of a few hours duration. At the other extreme it may be “open book” and you may be asked to return answers after several days of research and deliberation. Your committee will establish the ground rules for your preliminary examination.

Should you fail this examination, you will be given a second chance within a time limit set by your major advisor(s) in coordination with the Dean’s Office. ***If the second attempt is failed, you will be disqualified and dropped from the doctoral program at CATIE.***

Upon successful completion of the Preliminary Examination, you are officially admitted to *Doctoral Candidacy* with a special form (Form DP-4) completed, signed and filed with the

Graduate School. You can now concentrate fully on your research under the guidance of your major advisor(s) and other members of your DAC.

For the two joint doctoral programs (with Bangor University and the University of Idaho), the candidacy examination usually takes place when the student is at the partner university (during the first year) under the direction of the Doctoral Advising Committee and the appropriate offices at each institution (at CATIE, the Dean's Office). In the options under the CATIE doctoral program, the candidacy examination is realized at CATIE.

4. The Research Plan

Research, the systematic quest for new knowledge, involves discovery and discovery is an exciting adventure. It is “the systematic, controlled, empirical, and critical investigation of hypothetical propositions about the presumed relations among natural phenomena” quoting F. N. Kerlinger who wrote a book on “Foundation of Behavioral Research”. Of course, in CATIE doctoral research may focus on socioeconomic themes as well.

Your doctoral research should be original, in depth, with sound conceptual and analytical underpinnings. It should take full advantage of existing knowledge and should be guided by a well-designed Study Plan with strong internal logic. Your research should be considered as on the “cutting edge” by professionals in your particular field of study.

Your Research Plan should be prepared as soon as possible after finishing your course work. Oftentimes, significant advances will have been made in the preparation for your research plan during the first year and indeed students in the BU-CATIE joint doctoral program or pursuing the European model should complete their research plans by the end of the first year. Advancing in the development of your Research Plan in an expeditious fashion is highly encouraged, but must have the strong support and orientation of your major advisor(s).

The preparation of your Research Plan must be done in close coordination with your major advisor(s) and DAC. Your Research Plan must include elements common to all excellent plans: a well-chosen topic, well-defined objectives, clear hypotheses capable of being tested and a well thought out conceptual framework, sound research methodology, appropriate analytical considerations, budgeting and logistics. It should be a well-written document prepared with great care and sophistication. Once you have drafted your Research Plan, it must have the approval of your DAC.

5. The Research Project Seminar

Your Research Plan is to be presented in a public seminar during which your DAC is present (physically or virtually). Sometimes the Research Plan is presented as part of the candidacy examination. If not, the Research Plan should be presented no later than one month after the approval of the preliminary or candidacy exam. The objective of this seminar is to receive additional feedback that could be of value to further refine your Plan. It also provides you the opportunity to present your plan in a professional setting, thereby enhancing your experience in making formal presentations. Often your presentation will be useful on-site where you carry out your research and also as a source of information for your final dissertation defense.

Once you have included all of appropriate corrections and suggestions and your Research Plan is approved by the DAC, you are ready to move forward with your doctoral research detailed in your Plan. At this time, **Form DP-5** is completed and submitted to the Graduate School along with a copy of your doctoral research proposal. Under no circumstances should the completion and approval of your Research Plan extend beyond 1.5 years. When this occurs, the duration of your program will be considerably longer than that desired.

In this stage of the study, it is recommended that you work closely (but at the same time, as independently as possible) with your major advisor(s). In addition, you should periodically meet with other members of your DAC to update them on your progress and receive input to enhance and improve your research work. This approach reduces the possibility of unpleasant “surprises” for members of your DAC when the time arrives for you to defend your dissertation. A notebook (“Bitácora”) has been prepared that is to be used to record topics discussed and commitments established during each meeting with your major advisor(s) and DAC members. At the end of each meeting you and the other person(s) participating in the meeting must review and sign the information recorded. This invaluable tool will facilitate smooth progress in your doctoral program and will foster a clear understanding of where things stand between you and your committee members.

Prior to starting field research, students going to the field to conduct all or part of their research must review and sign a form entitled “Mitigation of Risks” and file it with the CATIE Graduate School. A signature indicates students understand the risks involved in conducting field research so that they will take all the needed precautions. Partner universities (UI and BU) may have other requirements to meet before a student is authorized to conduct research.

6. Final Dissertation Draft and Determination of the Final Examination Date

You will be authorized to take your final examination once your doctoral dissertation is in its final *draft* form in accordance with the format developed by the Graduate School (see below), and is approved by your DAC. In the case of the joint doctoral programs, the format must also be acceptable to the partner institution. This clearly implies that your dissertation has been refined with substantial input from your major advisor(s) and committee members. This draft must be made available to each member of your DAC with *adequate time* for in-depth review (generally about three weeks). You should make an appointment with each member of your DAC and meet with him/her to receive any suggestions for improvement. In the case when your major advisor(s) and committee members are abroad, communication will have to be established electronically.

You will be required to incorporate corrections and suggestions made by your DAC in the preparation of the final draft of your dissertation. Once an acceptable draft has been prepared, the date for the final defense examination is set and publicized by the Graduate School in agreement with the evaluating committee (see the **Final Examination** section below for the makeup of the evaluating committee), to inform interested members of the faculty and student body. Evaluating committee members should receive the final draft of your dissertation at least three weeks prior to the final examination.

a. Dissertation Format and Publishing from Doctoral Research

The publication of doctoral research results is a mandatory step in your formation as a scientist. Publishing your results is important so that information from your work is made available to member countries and to the international community in general. The resulting publications will also greatly enhance your employment options. Doctoral research is expected to be of the highest quality. When your results are published in recognized international refereed journals, this attribute of quality is confirmed in the eyes of your peers. To help you develop and then publish from your dissertation, the following guidelines are given. Remember that in the case of the joint doctoral programs, the dissertation format below may be adjusted to also be acceptable to the partner institution.

1. The body of the doctoral dissertation shall be composed of publishable manuscripts prepared in accordance with the requirements of the journals for which they are intended. Among the manuscripts included in the dissertation, there must be at least one paper submitted to a refereed international journal in order to graduate.
2. An introductory chapter is to be included which is not a part of the publishable manuscripts contained in the dissertation. This chapter should include a description of the overall problem(s) that has been addressed and the overall aim of the research. There shall also be a chapter following the publishable manuscripts describing the overall conclusions of the project and recommendations for future work.
3. The title page, the approval form, the table of contents, the introductory chapter, the publishable manuscripts, the conclusions and recommendations chapter and any appendices are to be enclosed in the complete dissertation volume in that order.
4. The number of manuscripts to be published from the dissertation is to be decided by the major advisor(s) and the student.
5. The authorship for each manuscript is to be decided by the student and major advisor(s).
6. In all manuscripts, your CATIE, affiliation must appear. Furthermore, acknowledgements must include the other institutional participants in the project and financial sponsors.

7. Final Examination (Defense of the Dissertation)

For joint doctoral programs, the final examination can take place physically at either CATIE or the partner institution. The other partner will usually be linked electronically to the examination. For CATIE doctoral programs, the examination will take place at CATIE, but DAC members from other institutions can also be linked to the examination by electronic means.

During the final examination, you will be required to make a 30 to 40 minute oral presentation on your research that *should equal or exceed the quality of presentations made at international conferences*. After the presentation, there is a 15-minute period of questions open to the public. You will need to respond to these questions with professionalism and care. Oftentimes questions will be forthcoming that require you to think outside the specific results of your dissertation, integrating other concepts you have been exposed during your academic program and citing research results from other studies. Suggestions for preparing and delivering your dissertation presentation should be sought from your major advisor(s).

For students in the UI-CATIE joint doctoral program or a CATIE doctoral program option, the DAC is the evaluating committee and once the public questioning period has ended, the audience is excused and questioning by your DAC begins. Many questions will concentrate on your dissertation research (methodology, data collection, data analysis, conclusions, etc.) to assess the depth of your understanding of the research and your ability to view your results from a broader context. You will be expected to possess a firm grasp of key scientific literature (both recent and past publications) related to your topic of research. Additional questions other than those related directly to your dissertation may be, and often are, asked. You must remember that you are earning a Doctorate of Philosophy and therefore must be prepared to view your work outside the confines of your very focused research.

For students in the joint program with Bangor University, it is important to note that the final examination involves a evaluating committee of external and internal examiners who are not members of your DAC. Indeed, persons who have assisted you during the writing of your dissertation cannot be considered for the role as internal examiner.

Once the evaluating committee completes its questioning, you will be requested to leave the room so that deliberations by the committee members can take place. These deliberations may take from a few minutes to one hour or more. Once the committee reaches its conclusions, you will be called back to the meeting room by your major advisor at the presentation site (UI-CATIE joint doctoral program and CATIE doctoral program options) or the Chair of the Examination Committee (BU-CATIE joint doctoral program) to be informed of the committee's decisions. If you do not pass, your major advisor(s) (UI-CATIE joint doctoral program and CATIE doctoral program options) or external/internal examiners (BU-CATIE joint doctoral program) will inform you of additional steps that must be taken to successfully complete your degree. Options may include the inclusion of additional revisions in your dissertation, the need to carry-out additional analysis, the mandate to better interpret and synthesize the results or possibly you will be required to repeat the oral exam. ***If you fail in the second attempt or if you do not take the steps mandated by your examination committee, you will be disqualified and dropped from the doctoral program.*** Students in the BU-CATIE doctoral program can be recommended for the Master of Philosophy (MPhil) at Bangor University if this happens.

If, on the other hand, you pass the examination (by a vote of the majority which *must include your major advisor(s) in the UI-CATIE joint doctoral program or a CATIE doctoral program; or by a consensus of the examination committee in the BU-CATIE joint doctoral program*) a special form (**Form DP-7**) is completed, signed and submitted to the Dean of the Graduate School who checks for compliance with all CATIE policies. He/she then signs the form and files it with the Graduate School.

It is important to note, that in the case of the BU-CATIE program, the external and internal examiners prepare reports on forms provided by BU. These forms detail the results of your examination and establish in precise terms, the steps you will be required to take to earn your degree.

8. The Doctoral Dissertation

Upon successful conclusion of the final defense, you are required to prepare the *FINAL VERSION* of your dissertation, incorporating modifications indicated during your final examination. *Your major advisor(s) confirm(s) that you make required revisions prior to signing the Dissertation Approval Form (Form DP-8).* All members of the DAC and the Dean of the Graduate School must sign this form that will be inserted at the front of your dissertation. Copies of the dissertation are to be provided to the Library, Graduate School your major advisor(s), committee members and others required by funding or institutional arrangements. Check with the Graduate School to determine the number of copies required. An electronic copy of the dissertation is to be provided to the Graduate School and to the Library.

Petitions

Petition is made when *you and/or either one of your co-advisors* are, for legitimate reasons, seeking exceptions to existing CATIE policies or requirements for the doctoral program. To file a petition, complete **Form DP-9** and submit it to the CAD through the Dean of the Graduate School. You may attach additional sheets to the form, if needed, to properly state your reasons for seeking the exception(s).

Graduation Ceremony

The graduation ceremony is a time of joy and celebration. It is a time to take pride in your accomplishments and look forward to joining a highly skilled professional community in your country and the world. This is also a family time when family members are often invited to join you in celebration.

All graduates are strongly encouraged to take part in the graduation ceremony. During graduation, you, as a doctoral graduate, will be individually recognized for your achievements and the title of your dissertation will be presented to the public attending the ceremony. The academic community in CATIE will take pride in your accomplishments.

Intellectual Property Rights

All intellectual properties (patents, copyrights or other intellectual property items of commercial value) arising from research or other activities taking place at CATIE, belong to CATIE and its partners, unless other conditions have been previously established in an agreement for intellectual properties. The inventors, researchers, students and employees of CATIE cede rights to such intellectual properties to CATIE and its partners according to terms established in institutional agreements. In each case, CATIE considers its obligations to funding sources resulting in the production of intellectual properties and, if appropriate, negotiates with the proper entities regarding the distribution of income from the sale or licensed use of such properties.

CATIE, at its discretion, may also enter into an agreement with the inventors or others who may be best suited to market the intellectual property and share any revenues generated.

Scientific Misconduct

Scientific misconduct constitutes fabrication, falsification, plagiarism, deception or other practices that seriously deviate from commonly accepted practices in the scientific community for proposing, conducting or reporting research. If allegations are reported by a responsible party (professor, administrator or creditable colleague elsewhere) an Inquiry Committee will be formed by the Graduate School. The Inquiry Committee is responsible to gather all the facts in writing and will recommend action to be taken. The accused person has the right to submit any information to clarify the accusation and is generally expected to appear before the Inquiry Committee. Recommendations will be deliberated upon in an executive session of the CAD and a final course of action will be determined.

If misconduct is confirmed in the executive session of the CAD, the Director General, based on the findings and recommendations of the Inquiry Committee and CAD, will impose appropriate sanctions that could include *disqualification to earn a degree at CATIE*. Inquiries into suspected scientific misconduct will be managed with the strictest confidentiality in all phases of the process.

VI. FINANCIAL ARRANGEMENTS

Students entering into CATIE's doctoral program do so under diverse funding arrangements that imply distinct obligations in terms of reporting, timelines and even in defining the research topic to be pursued. Generally, you will be required to sign a financial contract with the Head of Administration and Finance for the Division of Education. Once the contract is signed, the Graduate School has the responsibility of implementing the contract in accordance with CATIE policies and procedures.

Details of the financial arrangements under the CATIE doctoral program (in-Spanish and in-English options) can be found in the "Academic Policies and Procedures for the Doctoral Program". Students in this program are expected to read and be knowledgeable about this document.

Details of the financial arrangements under the BU-CATIE joint doctoral program can be found in the "Collaboration Agreement: Joint Doctoral Program in Tropical Agriculture, Forestry, Agroforestry, and Conservation Biology". Students in this program are expected to read and be knowledgeable about this Collaboration Agreement.

Details of the financial arrangements under the UI-CATIE joint doctoral program can be found in the "Partnership Agreement on a Joint Doctoral Program between CATIE and the University of Idaho". Students in this program are expected to read and be knowledgeable about the Partnership Agreement.

As an overview, some key differences in financial arrangements between the different doctoral programs are:

CATIE Doctoral Program

In this program, all full-time and part-time payments go to CATIE at the specified rates with the exception of any direct payments for coursework at a cooperating institution. After the requirement for full-time enrollment is completed, a student has to satisfy CATIE's part-time enrollment requirements outlined on page 18.

Joint Doctoral Program with Bangor University

In this program students pay the institution and institutional tuition and fees at which they are registered full time. Later, each collecting institution transfers 50% of what was collected to the other institution. After the requirement for full-time enrollment is completed, a student has to satisfy the part-time enrollment requirements for each institution. CATIE's part-time enrollment requirements are outlined on page 18.

Joint Doctoral Program with the University of Idaho

In this program, each semester (or two trimesters) a student is registered full-time at either UI or CATIE, they pay their full-time tuition at that institution plus for one semester credit (\$350) and a Joint Program Fee (\$250) at the other institution. After the full-time enrollment requirement is completed, a student has to satisfy the part-time enrollment requirements for each institution. CATIE's part-time enrollment requirements are outlined on page 18.

VII. EXPENSES

Tuition and Other Costs at CATIE

Tuition and fees vary between US\$13,000-14,000 per year for the full-time enrollment years at CATIE under the different CATIE doctoral programs. Part-time enrollment at CATIE is charged by the credit and may also include the payment of appropriate fees. The latest tuition and fee rates, a listing of fees, and estimates for on-campus housing and meals for married and single students can all be found at the web site for the CATIE Graduate School (<http://posgrado.catie.ac.cr/posgrado/doctorados/>) or are available in consultation with the Head of Administration and Finance for the Division of Education.

Tuition and Expenses at Partner or Cooperating Universities

Depending on which partner or cooperating university you choose for your doctoral studies, and whether that university is located in the United States, Europe, or Latin America, tuition and other expenses vary, sometimes significantly. Indeed under some student exchange agreements, students continue to pay tuition to CATIE while studying abroad. Other costs pertaining to transportation to the partner or cooperating university, housing costs, books, supplies, clothing, etc. must all be carefully considered. Since no single answer can be given to what these costs may be, the best approach is to contact your major advisor(s) and seek his/her/their assistance in determining these costs. Under no circumstances will students be authorized to travel abroad, without a clear demonstration of available funds to cover academic and living costs.

VIII. WORDS FOR THE WISE

During the course of your doctoral studies, you will be faced by many challenges and tasks that can be overcome easily, provided that you do not lose your equanimity and sense of purpose. The fulfillment of administrative procedures and regulations may at times seem tedious. These necessary tasks require some patience and are a good opportunity to utilize and refine your interpersonal skills. The use of good judgment with tact and courtesy will no doubt make your efforts much more enjoyable and effective.

Your relationship(s) with your major advisor(s) is/are critically important to the success of your program. He/she/they will be quite concerned that you achieve success. There are times, however, when differences of viewpoints are inevitable. In such situations, you must try to arrive at a resolution in a professional and courteous manner. It is also imperative that you maintain a friendly and professional relationship with all other members of your Doctoral Advisory Committee. This creates an environment that is conducive to learning and enhances the quality of your educational experience. Your professors today, will be your colleagues tomorrow and oftentimes productive relationships formed during doctoral studies last long after one receives his/her degree.

At the partner or cooperating universities, you will not only represent yourself but you also represent CATIE and its reputation. You need to be a good ambassador by concentrating fully on your studies and by extending courtesy and friendship to the people you encounter. It should be an exciting time to learn about another culture and perhaps different ways to do things. This exposure will broaden your horizon and enhance your skills as a person and as a future scholar.

Good luck!

IX. REVIEW AND REVISION

It is required that this document is reviewed every three years and appropriate changes incorporated.

X. ANNEXES

Note: These forms are designed for the CATIE doctoral program or the CATIE side of the two joint doctoral programs. Different forms or modifications of these forms may be needed to comply with partner or cooperating university requirements. In most cases, forms will be required in both institutions.

Annex 1. Schedule for Filing Forms

Item	Form No.	When?
Appointment of major advisor and doctoral advisory committee	DP-1	First trimester
Study plan	DP-2	First trimester
Changes to study plan or advisory committee	DP-3	As needed
Report of preliminary examination and advancement to candidacy	DP-4	For CATIE (North American model) and CATIE-UI: After completion of at least 18 semester credits (or equivalent) of coursework. Ideally towards the end of the first year. For CATIE (European model) and CATIE-BU: During the first year.
Research Project Plan	DP-5	For CATIE (North American model) and CATIE-UI: Ideally at the end of the first year or the start of the second year, and including the presentation of the Research Seminar. For CATIE (European model) and CATIE-BU: During the first year.
Report of credits earned in courses and research	DP-6	Periodically throughout the program
Final defense examination	DP-7	Dissertation is in final draft form
Dissertation approval form	DP-8	Dissertation is in final form
Request for petitions	DP-9	Whenever needed

Annex 2. Forms

**CATIE
GRADUATE SCHOOL**

**APPOINTMENT OF MAJOR ADVISOR AND
DOCTORAL ADVISORY COMMITTEE**

Student name: _____

Student ID No.: _____ Date: _____

Major area of concentration: _____

Started: _____

(Date)

Cooperating university: _____

Country: _____

Major advisor: _____
Printed name Signature

Email: _____

Co-Advisor: _____
Printed name Signature

Committee Member: _____
Printed name Signature

Email: _____

Committee Member: _____
Printed name Signature

Email: _____

Committee Member: _____
Printed name Signature

Email: _____

Complementary Signs:

Student _____
Signature Date

Dean of Graduate School: _____
Signature Date

Copies to: student, major advisor(s) and committee members. File original copy in Graduate School

**CATIE
GRADUATE SCHOOL**

INDIVIDUAL STUDY PLAN

Date: _____ Student: _____ ID No.: _____

Major Area of Concentration: _____

Semester Studies Began: _____

List below all courses you plan to apply toward your degree requirement:

Course title	Credits	University

Deficiency courses (Do not count toward degree but required)

Monthly schedule for each year of key stages or activities: On separate pages that can be added to this form, draw up a timetable for the main stages of your doctoral program. Include aspects such as: appointment of major advisor(s), advisory committee, internship in partner or cooperating university, individual plan of studies, candidacy examination, research project plan and seminar of research project, phase of data compilation, data analysis, development of articles, writing the draft of the dissertation, final examination, final editing and printing of the dissertation and graduation.

Approval Signatures:

Student: _____ Date: _____

Major Advisor: _____ Date: _____

Co-Advisor: _____ Date: _____

Committee Member: _____ Date: _____

Committee Member: _____ Date: _____

Committee Member: _____ Date: _____

CATIE
GRADUATE SCHOOL

CHANGES TO STUDY PLAN OR ADVISORY COMMITTEE

Student name: _____ ID No. _____ Date: _____

Add the following course (s):

Course No.	Title	Semester Credits	Institution

Delete the following course (s):

Course No.	Title	Semester Credits	Institution

Other changes. Please indicate: _____

Add the following Member (s):

Name: _____ Signature: _____ Date: _____
Email: _____

Name: _____ Signature: _____ Date: _____
Email: _____

Remove the following Member (s):

Name: _____ Signature: _____ Date: _____

Name: _____ Signature: _____ Date: _____

Approval Signatures:

Student: _____ Date: _____

Major Advisor: _____ Date: _____

Co-Advisor _____ Date: _____

Dean of Graduate School: _____ Date: _____

CATIE
GRADUATE SCHOOL

RESEARCH PLAN

(A copy of the Research Proposal must be attached to this form)

Student name: _____ Date: _____

Major area of concentration: _____

Cooperating University: _____

Title of research Seminar given: _____

Date, Research Seminar given: _____

Title and brief description of your project: _____

Approval signatures:

Student: _____ Date: _____

Major Advisor: _____ Date: _____

Co-Advisor: _____ Date: _____

Committee Member: _____ Date: _____

Committee Member: _____ Date: _____

Committee Member: _____ Date: _____

Dean, Graduate School _____ Date: _____

CATIE
GRADUATE SCHOOL

REPORT OF RESEARCH CREDITS
DOCTORAL (Ph.D.) PROGRAM

*This report should be properly filled out and returned to the Registrar Office
of the Graduate School*

Student name: _____

Student I.D. Number: _____ Date: _____

Major area of concentration:

Started: _____ Course Code: TC-506

- Joint Program with University of Idaho
- Joint Program with University of Wales, Bangor
- CATIE Doctoral Program

Directed Research:

Quarter: _____

Number of Credits: _____ Grade: _____

_____ Major Advisor	_____ Signature	_____ Date
------------------------	--------------------	---------------

CATIE
GRADUATE SCHOOL

FINAL DEFENSE EXAMINATION
JOINT Ph.D. PROGRAM CATIE-IU OR Ph.D. CATIE PROGRAM
*(Major Advisor or Examination Committee Chair MUST return this form
to the Graduate School)*

We, the undersigned committee, find that : _____
Student name
a candidate for the degree of ***Doctor of Philosophy***.

_____ Did pass the preliminary examination
_____ Did **NOT** pass the preliminary examination

That was given on: Date of defense: _____

Dissertation title: _____

Check here if agree

Committee member's
signatures

Check here if
disagree

If opinion was in the minority, please state the reason (s) below:

Approval:

Dean, Graduate School: _____ Date: _____

CATIE
GRADUATE SCHOOL

FINAL DEFENSE EXAMINATION
JOINT Ph.D. PROGRAM CATIE-UNIVERSITY OF BANGOR
(External examiner MUST return this form to the Graduate School)

We, the undersigned committee, find that : _____
Student name
a candidate for the degree of *Doctor of Philosophy*.

_____ Did pass the preliminary examination
_____ Did NOT pass the preliminary examination

That was given on: Date of defense: _____

Dissertation title: _____

Name of external examiner	Signature	Approved	
		Yes	No
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Chairman			

Comments: _____

Approval:

Dean, Graduate School: _____ Date: _____

CATIE
GRADUATE SCHOOL

DISSERTATION APPROVAL FORM

This dissertation of _____ submitted
Student name

for the degree of ***Doctor of Philosophy*** entitled: _____

Has been reviewed in final form and approved, as indicated by the signatures and dates given below:

Major Advisor: _____ Date: _____

Co-Advisor: _____ Date: _____

Committee Members: _____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____

Dean, Graduate School: _____ Date: _____

CATIE
GRADUATE SCHOOL

REQUEST FOR PETITIONS

Student Name: _____ ID No.: _____

Date: _____ Address: _____

Phone: _____ Email: _____

To: Doctoral Committee of the Graduate Council

I, _____ petition to have the following
requirement waived: _____

For the following reason (s): _____

Student's signature: _____

Major Advisor Comments: _____

Major Advisor Signature: _____ Date: _____

Dean, Graduate School: _____ Date: _____

Committee Action: _____ Approved

_____ Denied

Student shall attach any supporting documents to this form before submission.

Annex 3. Sample Dissertation Title Page



**TROPICAL AGRICULTURAL RESEARCH
AND HIGHER EDUCATION CENTER**

GRADUATE PROGRAM

EFFECT OF SILVICULTURAL TREATMENTS ON CARBON SEQUESTRATION

By
Carlos González Smith

Thesis submitted for consideration of the Graduate Program as a requirement for
the degree of

DOCTOR OF PHILOSOPHY
IN NATURAL RESOURCES

Turrialba, Costa Rica, 2013