PhD Handbook for Construction Management

<u>Alla</u>



Table of Contents

SECTION

PAGE

1. Forward	
2. Introduction	
Resources	
Contacts	
Completion of a PhD involves two main components	
3. Application for Admission into the PhD Program	
Summary of Application	
4. Scholarships, Fellowships, Assistantships, and Financial Aid	
Graduate School Funding	
The Rinker Scholar Program	
Graduate Teaching Assistantships	
Research Assistantships	
Financial Aid	
5. First Year in the PhD Program	
Summary of First Year	
Establish a Preliminary Program of Study	
Write a Preliminary Dissertation Proposal and Establish a Supervisory	
Committee	5
Establish a Complete Program of Study	
Registration of Courses	
Submit University of Florida Individual Development Plan (UF IDP)	6
6. Subsequent Years in the PhD Program	
Summary of Subsequent Years	
Detailed Research Proposal Defense and Qualifying Exam	7
Transfer of Credits	8
Candidacy	
Research for Doctoral Dissertation	8
Registration for Courses	
Submit University of Florida Individual Development Plan (UF IDP)	
Final Dissertation Defense	9
7. Additional Student Responsibilities	
General Responsibilities	
Grades and Credits	
Appendix I:	
Core College of DCP courses	
Required Construction Management Courses	
Appendix II:	
Form 1: Required Construction Management Courses	
Form 2: Plan of Study	
Form 3: Request to Substitute Courses	
Form 4: Supervisory Committee	
University of Florida Individual Development Year 1	
University of Florida Individual Development Subsequent Years	26



A Message from the Director of Graduate Programs and Research

Welcome to Rinker School!

Joining the Rinker School as a PhD Degree student may be the most significant decision you made towards your future career – industry or academia. The Rinker School is the oldest continuing construction program in the country. It was accredited in 1975 by the American Council for Construction Education and the first to offer PhD degree in Construction Management (formerly, Building Construction).

Rinker School has an outsize impact in its field and is rated the top construction management program for research in the United States and across the world. We are proud to share that Rinker School alumni lead the construction industry as well as construction management programs globally.

Our top-notch faculty with advanced knowledge of construction industry, techniques, and research and development will impart the knowledge that is much needed in the construction industry, now and in the future. The numerous research awards from external agencies secured by our faculty is a true testament of the high-quality research activity conducted at the Rinker School. Through active participation and dissemination of construction research in reputed conferences globally, our Rinker faculty have made tremendous impact. Take a moment to read our faculty accomplishments and get inspired!

This PhD Degree handbook was originally developed by Dr. Ian Flood, Professor of Construction Management, to support your success and timely graduation. Therefore, use this handbook as a quick-reference guide. Feel free to contact Mr. Joseph Carroll, Rinker School Graduate Admissions Officer or me if you have questions.

With clear goals, you are about to see a forward momentum in your career trajectory. Graduate and become a proud Rinker alumni, come back and share your insights with students, and make an impact!

Go Gators!

Dr. Ravi Srinivasan Director of Graduate Programs and Research M.E. Rinker, Sr. School of Construction Management College of Design, Construction and Planning University of Florida

Introduction

All new PhD students are required to read this handbook and its supporting documentation. <u>The student</u> is responsible for meeting all PhD program requirements and satisfying all deadlines, which are published in the Graduate School's academic calendar.

This document sets out the procedures and policies to be followed by both prospective and admitted students seeking the Doctor of Philosophy in Design, Construction and Planning with a concentration in Construction Management, within the M.E. Rinker, Sr. School of Construction Management (Rinker School) in the College of Design, Construction, and Planning (College of DCP). <u>This handbook is a supplement to the *Graduate Catalog* of the University of Florida's Graduate School and the *Doctoral Studies Handbook* of the College of DCP and should be read in conjunction with both of those documents. These documents and other general information on the doctoral program are available as follows:</u>

Resources:

- The *Graduate Catalog* is available at <u>https://catalog.ufl.edu/graduate/</u>.
- The Graduate School website is available at <u>http://graduateschool.ufl.edu/</u>.
- The *Doctoral Studies Handbook* of the College of DCP, is available at <u>https://dcp.ufl.edu/academics/phd8/</u>.
- The Rinker School website available at <u>https://dcp.ufl.edu/rinker/</u>.

Contacts:

- The Rinker School's **Director of Graduate Programs and Research** is Dr. Ravi Srinivasan. His email address is <u>sravi@ufl.edu</u>.
- The Rinker School's **Graduate Admissions Officer** is Mr. Joseph J. Carroll. His email address is josephcarroll@ufl.edu.

Completion of a PhD involves two main components:

- 1. Complete 90 credit hours of required and approved graduate level coursework. Note, up to 30 credit hours may be transferred from a prior master's degree, and an additional 15 credit hours of post-master's graduate study may be transferred from programs at approved schools offering doctoral degrees.
- 2. Complete and defend a high-quality original piece of research that makes a significant contribution to knowledge in the candidate's chosen field of study.

The two components appear straightforward, but they often involve complex systems which interplay with one another. Hence, this handbook was written to demystify the PhD process, while explaining rules and regulations which are unique to the Rinker School's doctoral program.

Application for Admission into the PhD Program

Summary of Application:

- 1. Identify common research interests and research funding availability with a Rinker School faculty who holds a Doctoral Research Faculty or DRF status (i.e., the eligibility to chair, co-chair, or become member of a PhD Committee.)
 - a. The faculty must be the one who directs PhD students as chair or co-chair.
 - b. The list of eligible Rinker School DRF is available at <u>https://dcp.ufl.edu/rinker/research-faculty/</u>.
- 2. Apply to the Doctor of Philosophy in Design, Construction and Planning.
 - a. Make sure to indicate the Construction Management concentration.
 - b. Make sure to comply with the deadlines, which are available at <u>https://dcp.ufl.edu/academics/phd8/phd-admissions/</u>.
 - c. The following materials are required:
 - i. Transcripts from all colleges and universities attended,
 - ii. A current résumé or curriculum vitae,
 - iii. Three letters of recommendation (academics preferred; professionals accepted),
 - iv. A statement of purpose:
 - 1. Length should be one to two pages,
 - 2. Font should be twelve-point, Arial, Times New Roman, or Calibri,
 - 3. Should clearly state why the student desires to study at the Rinker School,
 - 4. Should clearly state the objective of earning a PhD,
 - 5. Should clearly state research interests of the student, and
 - 6. Should clearly state the faculty with whom the student plans to work with.
- 3. The graduate application is available on the UF Office of Admissions website, <u>https://admissions.ufl.edu</u>.
- 4. Note the application fee is \$30 (plus a convenience fee when paying by credit card).
 - a. The fee is not waivable.
 - b. The fee is non-refundable.
 - c. Applicants should ensure they meet admissions criteria before applying.
- 5. Note that applicants may receive an admissions decision prior to receiving a funding decision.

A note about English proficiency exams.

Applicants who are not citizens of a country where English is one of the official languages will need to submit English proficiency exam scores, unless they graduated with a degree from a university in a country where the official language is English.

- 1. Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS) scores are both acceptable exams.
- 2. Reference <u>https://dcp.ufl.edu/academics/phd8/phd-admissions/</u> for current TOEFL and IELTS requirements.
- 3. Students may substitute the University of Florida English Language Institute (ELI) exit exam in place of acceptable TOEFL or IELTS scores. To learn more about the ELI program, visit <u>https://eli.ufl.edu/</u>.

Scholarships, Fellowships, Assistantships, and Financial Aid

Several sources of funding are available to assist students financially through the PhD program. All funds are awarded competitively. Broadly, the funding sources include:

- **Graduate School Funding**. The Graduate School Preeminence Award (GSPA), previously known as the Graduate School Fellowship, provides students with tuition assistance and a stipend. To learn more about the GSPA, and other types of funding potentially available from the Graduate School to incoming PhD students, visit <u>http://graduateschool.ufl.edu/prospective-students/funding/entering-phd-funding/</u>.
- The Rinker Scholar Program. This program provides faculty members from Associated Schools of Construction (ASC) schools with tuition assistance and a stipend for up to three years. The deadline for receipt of applications is December 5th for the subsequent Fall Semester. Further information on the Rinker Scholar program is available at <u>https://dcp.ufl.edu/rinker/academics/doctor-of-philosophy/construction-</u> management/rinker-scholar-program/.
- **Graduate Teaching Assistantships**. Each year, financial support is offered to eligible graduate students within the Rinker School to teach, or assist faculty in teaching, certain undergraduate courses. These are usually offered to students after they have joined the Rinker School. Graduate Teaching Assistantships (GTA) offer tuition assistance and a stipend for one or more semesters. GTA performance is evaluated at the completion of each semester.
- **Research Assistantships**. Faculty members of the Rinker School are actively involved in research which is often supported financially by granting agencies. This support often includes funding for Graduate Research Assistants (GRA), providing tuition assistance and a stipend for one or more years. Applicants to the PhD program interested in this source of support should contact faculty members that share a common research interest.
- **Financial Aid**. Domestic students may qualify for Federal Financial Aid. Students must complete the Free Application for Federal Student Aid (FAFSA) to see if they qualify. To learn more, visit the Office of Student Financial Affairs website, <u>https://www.sfa.ufl.edu/</u>.
- Latin American and Caribbean Scholarship. The Latin American and Caribbean Scholarship (LAC) is available to full-time students who are citizens of a Latin American or Caribbean country (including Puerto Rico and the U.S. Virgin Islands). The LAC grants Florida resident tuition to it recipients plus \$500 per year for books. There is no application for the LAC; the Rinker School of Construction Management automatically considers applicants from eligible countries during the admissions process. To learn more about the LAC, reference the UF International Center website, https://internationalcenter.ufl.edu/latin-american-caribbean-lac-scholarship.
- **Rinker School Scholarships**. The Rinker School has approximately 30 scholarship awards available each year, which typically award between \$500 to \$2,000. Applications for the scholarships can be found on the Students section of the Rinker School website. Note that students must have a UF GPA to be eligible for Rinker School scholarships, and additional eligibility requirements exist for many of the scholarships.

First Year in the PhD Program

Summary of First Year

	Task	Timeline
1.	Meet with PhD committee chair.	Must occur immediately on arrival at UF.
2.	Establish a preliminary Plan of Study (Form 2) and	Must complete at start of 1 st semester.
	obtain signature from the committee chair.	
3.	Send duly signed and dated Form 2 to Graduate	
	Admissions Officer.	
4.	Enroll in Research Methods in the 1 st semester to	
	gain knowledge and competency to write the	
	preliminary dissertation proposal.	
5.	Write a preliminary dissertation proposal.	Must complete by the end of the 2 nd semester.
6.	Send the preliminary dissertation proposal to	
	Graduate Admissions Officer.	
7.	Establish a PhD Committee.	Must complete by the end of the 2 nd semester.
8.	Establish a comprehensive program of study (Forms	Must complete by the end of the 2 nd semester.
	1, 2, and 3).	
9.	Prepare UF Individual Development Plan (IDP) for 1 st	Must be completed at end of each year.
	year, obtain signature from the committee chair.	
10.	Send duly signed and dated form to Graduate	
	Admissions Officer.	

Establish a Preliminary Program of Study

Immediately upon arrival at the University of Florida, the student shall consult with their faculty committee chair to determine the student's goals and address issues such as required and core courses, remedial courses, financial support, time constraints, any special circumstances that need attention, and to start working towards selection of a supervisory committee.

The first year is the foundation year and provides the student with the opportunity to complete core course requirements and to pursue general course work to correct deficiencies and fill in gaps in their background, although other courses relevant to the student's program of study may also be taken during the first year (time permitting). Consequently, at the start of the first semester, the student must complete a preliminary program for the first year of study, in consultation with their committee chair. Reference the appendices in this handbook for additional information on courses.

Write a Preliminary Dissertation Proposal and Establish a Supervisory Committee

As soon as possible during the first two semesters, the student, in consultation with their faculty chair, must write a preliminary dissertation research proposal and select and register their supervisory committee. The purpose of the preliminary dissertation proposal is to encourage the student to formally consider their research focus and to help select the supervisory committee. The proposal must include the following components:

- o Title,
- Background,
- o Aim and objectives,
- Scope of work,
- Methodology, and
- Bibliography and identification of the sources of data/information.

The supervisory committee must comprise at least four total members, including the chair, and should be structured as follows:

Revision July 2021

- The chair who must hold doctoral research faculty (DRF) status and be a faculty member of the Rinker School.
- The co-chair or first member must hold DRF status be a faculty member within the College of DCP.
- An additional member must hold either graduate research faculty (GRF) status or DRF status and either be a faculty member within the College of DCP.
- One member must be an external member from a college at the University of Florida other than the College of DCP, who must hold GRF or DRF status.
- Note, a member without GRF status at our outside UF may be appointed if that person has a special area of expertise required for the committee. The committee chair must write a brief justification for adding the Special Member and obtain the Special Member's *curriculum vitae*. After submission to the Graduate School, the appointment of the Special Member will either be approved or denied.
- If the student has chosen a minor, then a member must be drawn from the unit representing that discipline. If the student has more than one minor, the committee must include a member from each unit representing those disciplines.

The supervisory committee should comprise faculty members that, collectively, provide expertise across all relevant aspects of the student's chosen field of research.

Establish a Complete Program of Study

The student must establish a program of study (completing Form 1, 2, and 3) before the end of the first year of study. The chair and student should consult, where relevant, with other members of the committee and the Rinker School Graduate Programs when establishing the program. The program may be subsequently modified after consultation with the chair and the supervisory committee. The program of study will cover the following:

- Core courses,
- Any required courses deemed necessary by the supervisory committee,
- The required elective in the College of DCP outside of the Rinker,
- Other courses required to satisfy the requirements of the PhD program and to assist the student in the pursuit of the dissertation research,
- Where relevant, the courses specified for any minor program of study being pursued by the student, and
- Any remedial English classes identified as being necessary by the supervisory committee.

Register for Courses

Registration for BCN-prefix courses must be done through the Rinker School Graduate Admission Officer, Mr. Joseph Carroll. Registration for DCP-prefix courses must be done through DCP Academic & Research Administrator, Ms. Stacy Peazant. Consultation with other academic units may be necessary to register for courses with different prefixes.

Submit University of Florida Individual Development Plan (UF IDP)

The University of Florida Individual Development Plan (UF IDP) template is used for advising and mentoring PhD students at UF. A UF IDP must be completed in conjunction with, and approved by, a student's committee chair at the end of each year. The UF IDP documents a student's progress through the PhD program and strategizes how graduate them in a timely manner. The UF Graduate School's IDP template should be used to complete the UF IPD.

Subsequent Years in the PhD Program

Summary of Subsequent Years

Task	Timeline
Complete all core and required courses.	Should be completed by the end of the 2 nd
	year.
Transfer credits from previous graduate work.	Should be completed by the end of the 2 nd
	year.
Complete the research proposal defense, take	Should be completed by the end of the 2 nd
the qualifying exam, and apply for candidacy.	year or beginning of the 3 rd year.
Research for Doctoral Dissertation	Completed after becoming a PhD candidate.
Submit UF IDP.	Must be completed at end of each year.
Defend the dissertation.	Should be completed by the end of the 4 th
	year.

Detailed Research Proposal Defense and Qualifying Exam

All PhD students must defend a detailed proposal for their research. To be eligible to take this exam, the student:

- will normally have reached at least the 3rd semester of PhD study,
- must be registered for the current semester, and
- o must have satisfied all core and required courses including, where relevant, all required minor courses.

The research proposal defense must be scheduled at least two weeks in advance. It must be an oral multimedia-based presentation (such as PowerPoint) of the detailed research proposal. The full supervisory committee must be present at the defense. The student should provide a copy of the detailed research proposal to all committee members at least two weeks before the exam. The detailed research proposal should include the following components:

- o Title,
- Background,
- Aim and objectives,
- Scope of work,
- Hypotheses to be tested,
- Methodology,
- Bibliography and identification of the sources of data/information, and
- When available, results, analyses and conclusions produced to date.

The supervisory committee may request changes to the research proposal as a part of the defense. After the defense, the committee chair will solicit from the committee members a set of questions for the written qualifying exam. These questions should be aimed at: (i) helping the student focus on areas their research that need more contemplation or development; and (ii) establishing that the student has a solid understanding of the principles of construction as it relates to his/her course of study. These questions should be "take-home" and "open book" and involve about one day's work for each committee member submitting questions. The answers must be returned to the committee chair who will then distribute them to the committee members. A follow-up meeting between the committee members and the student must then be held to review the modified research proposal and Revision July 2021 7

his/her responses to the written questions. At the conclusion to the follow-up meeting, the committee will attribute one of the following outcomes to the exam:

- \circ Pass no changes are required to the research proposal. The student should then apply for candidacy.
- Pass with minor corrections changes to the research proposal are required. Once the changes have been made, they will be checked by the committee chair and relevant committee members. Once the changes to the proposal have been made and approved, the student should apply for candidacy.
- Fail with possibility of retaking the exam significant changes to the research proposal are required, and the detailed research proposal defense and qualifying exam must be retaken.
- o Fail the student is not qualified to continue and will be dismissed from the PhD program.

Transfer of Credits

The number of credits that can be transferred will affect the number of courses that will have to be taken to complete the PhD program. Therefore, credits should be transferred prior to a student's qualifying exam. For a more detailed description of the transfer process and guidelines, refer to the DCP *Doctoral Studies Handbook*.

Candidacy

For a student to become a candidate for the PhD degree they must be granted formal admission to candidacy. To be eligible to apply for candidacy, the student must have successfully defended the detailed research proposal and passed the qualifying exam; and received the approval of the supervisory committee. Refer to the DCP *Doctoral Studies Handbook* for addition information.

Research for Doctoral Dissertation

Before reaching candidacy, a student may register for DCP 7979, Advanced Research, for up to 12 credit hours in the fall and spring semesters and 9 credit hours in the summer semester. If a student is registered for DCP 7979 in the semester in which he/she applies for candidacy, and candidacy is awarded by the midpoint of the semester, then those credit hours may be converted to DCP 7980.

Once a student has achieved candidacy, he/she is eligible to register for DCP 7980, Research for Doctoral Dissertation. At least 15 credit hours of DCP 7980 are required for completion of the degree. However, all 15 credits may not be taken at once. A PhD candidate may register for up to 12 credit hours of DCP 7980 in the spring and fall semesters and up to 9 credit hours in the summer. A PhD candidate must be registered for DCP 7980 in their final semester, with a minimum of 3 credit hours in a spring or fall semester or 2 credit hours in a summer semester.

The candidate is required to maintain continued contact with the chair and the committee members when conducting dissertation research work. The committee should meet on a regular basis to ensure proper progress. The committee may recommend the candidate be dismissed from the doctoral program if the candidate is found to be exerting insufficient effort or interest in his/her dissertation research.

The dissertation must represent high quality original research that makes a significant contribution to knowledge in the candidate's chosen field of study. The work, or parts thereof, should be worthy of publication in a leading refereed journal. The dissertation must be solely the product of the candidate's research, organization, and writing. All assistance external to the committee, such as

the use of an editor, must be approved by the chair.

Register for Courses

The same procedures as the first year apply. Reference that section of this handbook.

Submit University of Florida Individual Development Plan (UF IDP)

The same procedures as the first year apply. Reference that section of this handbook.

Final Dissertation Defense

At the point in time that the dissertation is substantially complete, a copy of it shall be submitted to each committee member for review and comments, and the candidate will request the scheduling of the final defense. If the committee considers the candidate ready to defend, then the defense will be scheduled. The deadlines for submitting the first and final submissions of the dissertation to the Graduate School can be found at <u>https://catalog.ufl.edu/graduate/</u>.

The first submission of the dissertation **must** follow the Graduate School's required format, be created inside their template, and **must** be submitted following their instructions, as detailed at <u>http://www.graduateschool.ufl.edu/graduate-life/graduation/graduation-checklist/</u>.

All members of the supervisory committee must be present at the defense. Guests are allowed but must not participate in any way during the defense. Up to two hours shall be allocated for the defense. The defense will begin with a multimedia presentation by the student and will conclude with questions from the committee to the candidate. The committee will vote on whether to award the doctoral degree to the candidate, based on the written dissertation, the candidate's presentation, the candidate's responses to the questions, and the candidate's provisional satisfaction of all other requirements of the PhD program.

Passing the final defense indicates that the committee is confident that the dissertation represents high quality original research that makes a significant contribution to knowledge in the candidate's chosen field of study, and that the work, or parts thereof, is worthy of publication in a leading refereed journal. The possible outcomes are:

- *Pass with no or minor revision*. No revision or very minor revisions to the dissertation are required and the revised dissertation needs only be reviewed by the chair.
- *Pass with major revision*. Major revisions to the dissertation are required. The dissertation must be re-submitted and reviewed by the committee before the candidate can graduate. In special cases another defense of the dissertation may be required.
- o Fail. The Candidate is dismissed from the PhD program.

Additional Student Responsibilities

General Responsibilities

The student is responsible for being informed about and observing all program regulations and procedures. The student must be familiar with the general regulations and requirements of the Graduate Catalog, the PhD program requirements of the College of DCP, and the offerings and requirements of the Rinker School PhD program, as laid out in this document. Rules are not waived for reasons of ignorance. Any exceptions to the policies stated in the Graduate Catalog must be approved by the Dean of the Graduate School.

The admissions officer is available to advise on routine matters such as registration, preparation of forms, interpretation of university policies, tracking credit hours, etc. The director of graduate studies and research can also provide this assistance and is the final point of approval for all student-related requests within the Rinker School. However, students are ultimately responsible for meeting regularly with their committee members (who are their primary resource for academic advisement and overall academic guidance throughout the doctoral program) and satisfying all requirements and deadlines of the program.

Grades and Credits

Students must complete at least 90 credit hours of graduate level coursework (including those transferred from other programs) and maintain a grade point average (GPA) of at least 3.0/4.0. If the student's GPA falls below 3.0, he/she will be placed on probation, and then must correct the situation by the end of the following semester. If the GPA is not raised to at least a 3.0/4.0 by the end of the following semester, the student may be dropped from the PhD program. All graduate level courses must be passed with at least a "B" or "S" grade. All undergraduate level courses must be passed with at least a "C" or "S" grade. Note, grades of "B-" and "C-" are consider failing, for graduate and undergraduate courses, by the Rinker School's PhD program.

A failed course must be retaken the next semester it is offered. Failed attempts of a course do not count towards the total credit hours. Grades of "I" (incomplete) received during the preceding term should be removed as soon as possible. Grades of "I" carry no quality points but become punitive after one term. All grades of "H", "I", and "J" must be removed prior to the award of the degree. Note, that some of the above requirements go beyond those of the graduate school.

Appendix I: Required Courses

The core courses are the foundation of the student's program of study in terms of understanding how to pursue research work. A student must complete the following courses as soon as possible on entry to the PhD program and pass with at least a B grade or equivalent. Any deviation from this set of courses must be requested using Form 3, and will only be granted in exceptional circumstances.

Core College of DCP courses

Reference the DCP Doctoral Studies Handbook for the full list of required DCP-prefix courses.

Required Construction Management Courses

As part of the requirement for formal admission to candidacy for the PhD degree, the student must have completed the following courses in the Rinker School, or have completed their equivalent from other programs within the University of Florida or from recognized programs at other universities. All required graduate level courses must have been passed with at least a B or S grade, or equivalent, while all required undergraduate level courses must have been passed with at least a C or S grade, or equivalent. Note, the equivalency of grades between different institutions will be determined by the University of Florida. The required courses that must be taken at the Rinker School are determined by the supervisory committee using Form 1.

Graduate level courses for credit. These courses will count towards the total number of credit hours for the PhD degree:

- BCN 5722 ADVANCED CONSTRUCTION PLANNING AND CONTROL: (3credits) Time-cost relationships for various construction operations.
- BCN 5737 ADVANCED ISSUES IN CONSTRUCTION SAFETY AND HEALTH: (3 credits) Current construction safety and health issues; development of specific methodology to provide hazard reduction on job sites.
- BCN 6748 CONSTRUCTION LAW (3 credits) Formation of a company, licensing, bid process, contracts, plans and specifications, mechanics liens, insurance bonds, and remedies as they relate to the building constructor and construction manager; case studies.

Graduate and undergraduate levelling courses not for credit. These courses will **not** count towards the total number of credit hours for the PhD degree:

- BCN 2405C CONSTRUCTION MECHANICS: (4 credits) Introduces the evaluation of structural behavior as it relates to buildings, the properties of structural materials, and the structural behavior of load resisting members.
- BCN 3223C SOILS and CONCRETE: (3 credits) (prerequisite: BCN 2405C) Studies the construction process to include soils, demolition, foundations, concrete mix design, and concrete placement techniques.
- BCN 3224C CONSTRUCTION TECHNIQUES: (3 credits) Studies the vertical construction process to include wooden platform frame construction, castin-place and pre-cast concrete construction, and steel erection. Included are masonry construction, interior and exterior finishes, vertical transportation systems, roofing, and other building components.

Revision July 2021

- BCN 3255C GRAPHIC COMMUNICATIONS INCONSTRUCTION: (3 credits) Studies construction communication tools, including the use of computeraided drafting (applications of 4-D modeling in construction), blueprint reading, free hand sketching, model building, piece-based simulations and the Internet.
- BCN 3281C CONSTRUCTION METHODS LABORATORY: (2 credits) Construction aspects of surveying with field and classroom exercises in the use of transit, level, chain and related equipment.
- BCN 3431C STRUCTURES: (3 credits) (prerequisite: BCN 2405C) Examines the material properties, code requirements, analysis and construction procedures for steel and reinforced concrete structures.
- BCN 4423C TEMPORARY STRUCTURES: (3 credits) Studies the temporary structures that contractors have to build in order to construct the primary structure; this includes formwork, scaffolding, and equipment for hoisting materials, personnel, and erecting structures.
- BCN 4510C MECHANICAL SYSTEMS: (3 credits) Principles and practices of building piping systems, hydraulics and pumps, comfort conditioning systems for building, heating and refrigeration equipment, building code considerations, plan reading and cost estimation.
- BCN 5618C COMPREHENSIVE ESTIMATING: (3 credits) Classification of work and quantity survey techniques; analysis and determination of costs of construction operations including direct and overhead costs, cost analysis, and preparation of bid proposals.
- BCN 5705C PROJECT MANAGEMENT FOR CONSTRUCTION: (3 credits) Project organization, site planning, and implementation.
- BCN 5789C CONSTRUCTION PROJECT DELIVERY: (3 credits) (prerequisites: BCN 5618 and BCN 6748) Designing, developing, estimating, scheduling, contracting, and administering small construction project, including extensive site and feasibility analysis.

Appendix II: Forms

ъл .. ~

Approved by Director of Graduate Programs and Research:

Signature:

Studen	t Name:				UFID #:			
	d courses must all be passed before the qu nust be taken at the Rinker School, but will							
Require	d Undergraduate Level Courses							
Course Number	Course Title	Year	Degree	Course #	Course Title	Academi	ic Institute	Grade
BCN 2405C	Construction Mechanics							
BCN 3223C	Soils and Concrete							
BCN 3224C	Construction Techniques							
BCN 3255C	Graphic Communication for Cor	nst.						
BCN 3281C	Construction Methods Lab.							
BCN 3431C	Structures							
BCN 4423C	Temp Structures							
BCN 4510C	Mechanical Systems							
BCN 5618C	Comprehensive Estimating							
BCN 5705C	Construction Project Management	nt						
BCN 5789C	Construction Project Delivery							
	d courses must all be passed before the qu ill count towards degree credit hours and g					o entry to the PhD prog	gram must be completed a	t the Rinker School.
Requ	ired Graduate Level Courses							
Course Number	Course Title	Year	Degree	Course #	Course Title	Academi	ic Institute	Grade
BCN 5722	Adv. Planning and Control							
BCN 5737	Adv. Const. Safety & Health							
BCN 6748	Construction Law							
Check the remed	ial English courses that have been of	deemed necess	sary for the	student, if appl	icable.			
Take SPEAK Tes	st. 🛛 Attend UF English Langu	1age Inst. 🛛	Oth	iers 🗌				
Students must co	mplete satisfactorily an approved e	elective from the	ne College o	of DCP before	the qualifying exam.			
Course Number:		Course Title	:					
	Approved by Committee Chair:	Signature:			E	Date:		

Date:

Name			UFID #				
Course #	CR	Course	Semester	Prerequisite	CR	Term/Year	Grade
BCN 2405C	4	Construction Mechanics	Fall/Spring	Physics I w/Lab	4		
BCN 3223C	3	Soils and Concrete	Fall/Spring	BCN 2405C	3		
BCN 3224C	3	Construction Techniques	Fall		3		
BCN 3255C	3	Graphic Communication in Construction	Fall		3		
BCN 3281C	2	Construction Methods Laboratory	Spring		2		
BCN 3431C	3	Structures	Fall/Spring	BCN 2405C	3		
BCN 4423C	3	Temporary Structures	Summer	BCN 3431C	3		
BCN 4510C	4	Mechanical Systems	Spring		4		
BCN 5618C	3	Comprehensive Estimating	Fall/Spring	BCN 3255C	3		
BCN 5705C	3	Project Management for Construction	Spring		3		
BCN 5789C	3	Construction Project Delivery	Fall/Spring	BCN 5618C/5722	3		
Subtotal	(Cours hours.)	es above are leveling courses and do not co	unt toward the re		34	Term/Year	Grade
BCN 5470	3	Construction Methods Improvement	Fall				
BCN 5715	3	Advanced Construction Labor Problems	TBD				
BCN 5722	3	Advanced Planning & Control	Spring		3	1	
BCN 5729	3	Design-Build Delivery Methods	Fall		5		
BCN 5737	3	Adv. Issues in Constr. Safety & Health	Spring		3		
BCN 5776	3	International Constr. Business Mgmt.	Summer	BCN 6748	3		
BCN 5874	3	Equipment & Methods for Heavy		BCN 6/48			
		Constr.	Spring				
BCN 5885	3 1 to	Methods/Mgmt. – Heavy Hwy. Constr.	Fall				
BCN 5905	9 1 to	Special Studies in Construction	All				
BCN 5949	3	Construction Management Internship	All	BCN 5618C/5722	_		
BCN 6036	3	Research Methods in Construction	Fall/Spring		3		
BCN 6558C	3	Building Integrated Renewable Energy	Fall				
BCN 6580	3	High Performance Green Bldg. Systems	Spring				
BCN 6583	3	Sustainable Housing	Spring				
BCN 6584C	3	Building Energy Modeling	Fall				
BCN 6585	3	Prin. of Sustainable Dev. & Constr.	Fall				
BCN 6586	3	Construction Ecology & Metabolism	Summer				
BCN 6641	3	Value Engineering	Spring	BCN 5618C			
BCN 6748	3	Construction Law	Fall		3		
BCN 6785	3	Construction Information Systems	Fall/Spring				
BCN 6905	1 to 3	Directed Independent Study in Constr.	All				
BCN 6933	3	Human Factors/Building Research	Summer				
BCN 6971	3	Thesis Research (MSCM only)	All				
DCP 7790	3	Doctoral Core I	Fall		3		
DCP 7794	1	Doctoral Seminar	Spring		1		
DCP 7911	3	Advanced DCP Research I	Spring		3		
DCP 7979	1 to	Advanced Research					
DCP 7980	9 1 to	Doctoral Research	All			+	
, , , , , , , , , , , , , , , , ,	9		All				
			1	TOTAL	19		
Chair Signature			Student Signature		Date		

Form 2: Plan of Study

Revision July 2021

Form 3: R	equest to	Substitute	Courses
-----------	-----------	------------	---------

Student Name:		UFID #:	
Academic Year:		·	
Course to be Substituted:			
Replacement Course:			
Reason for change:			
Approved by Director of Graduate Programs and Research:	Signature:		Date:
Approved by DCP PhD Program Director:	Signature:		Date:

Stu	dent Name:			UFID #:			
Committee Structure (require at least 1, 2, 3 and 4):				Approval of P		Proposal:	
#	Position (check one in group)	Institute	Unit	Faculty Name:	Signature:		Date:
(1)	□-Chair a.	UF	Rinker School				
(2)	□-Co-Chair a.	UF	Rinker School				
	□-Member a.	UF	Rinker School				
(3)	□-Member a. or b.	UF	Rinker School or DCP				
(4)	□-External Member b.	UF	х.				
	□-Minor & External Member b.	UF	х.				
(5)	□-Member a. or b.	UF	у.				
(-)	□-Minor Member a. or b.	UF	Ζ.				
	\square -Member a. or b.	UF	у.				
(6)	□-Minor Member a. or b.	UF	Z.				
(0)	□-Special Appointment c.	V.	w.				
Note	: a = DRF status; b = GRF status; c = hold P			te:			
	elevant to required area of expertise; x = 0				he Rinker School		
Pre	liminary Dissertation Proposal (1 to 2 nag	es) Type in f	he white spaces			
	(keep it short and to the point):		/ 21	•			
Back	ground (1 or 2 paragraphs):						
Aim	and Objectives:						
Scop	e of Work (short paragraph):						
Meth	nodology (1 or 2 paragraphs):						
Bibli	ography and Identification of the	Sources of	Data/Inform	ation:			
	oved by Director of Graduate Prog	grams and	Signatu	re:		Date:	
Resea	arch						

Form 4: Supervisory Committee

Why Create an Individual Development Plan?

An individual development plan (IDP) helps you to align your personal and professional goals with your academic expectations and responsibilities. Developing a plan will give you critical information for building the skills, knowledge, and resources necessary to for your career, and to prepare you for meaningful personal or professional opportunities after graduation.

UF's IDP template will be customized to your program's specific context. The template is comprised of a selfassessment of your current skills and interests, a summary of your goals for the upcoming year based on your self-assessment, and an action plan to shape your skillset, created in conjunction with your advisor.

How Will an IDP Guide My Progress?

Your IDP will serve as a guide to your annual progress meetings with your advisor, to ensure progress is made towards your personal and professional goals. Each year, you can develop a revised IDP, based on an updated assessment of your goals and skills, as well as the progress you make throughout your career, to create attainable steps for fulfilling long-term goals.

How Can I Use This Template?

Please take the time to complete the IDP template to the best of your ability soon after your arrival at UF. It's ok if you are unable to provide clear answers on parts of the IDP template; the document is mean to guide you in formulating a plan for your future, and any questions that arise can be addressed in your first meeting with your advisor. Also, schedule a meeting with your advisor or graduate coordinator early in your first semester at UF, to discuss your goals and expectations for your time at UF.

The IDP document is meant to complement the creation of your academic plan of study, which will outline the measures for academic success in your program. To ensure that both the IDP and your plan of study are coordinated, students and advisors each have a set of expectations, which are listed below, to support your progress towards your degree:

EXPECTATIONS

<u>Student</u>

- Take primary responsibility for the successful completion of my degree.
- Meet regularly with my advisor and provide her/him with updates on the progress and results of my activities.
- Establish a shared understanding of satisfactory progress with my advisor.
- Work with my research advisor to develop a thesis/ dissertation project and select a committee.
- Actively seek out advice and feedback from my advisor, committee, and other mentors.
- Remain informed of the policies and requirements of my graduate program, and the University of Florida.
- Attend and participate in department meetings and seminars.
- Maintain knowledge of original literature in my field.
- Be a good research collaborator, maintaining a safe, clean, and collegial academic and work environment.
- Discuss policies on work hours, sick leave, and vacation with my advisor.
- Discuss expectations on authorship and attendance at professional meetings with my advisor.

<u>Advisor</u>

- Be committed to a student's education and training as a future member of the research community.
- Be committed to guiding a student's research project, allowing them to take ownership of their research.
- Encourage students to set reasonable goals and establish a timeline for completion.
- Provide and seek regular and honest feedback on an ongoing basis.
- Commit to improving as a mentor.
- Be open to students by encouraging them to bring concerns to you, while aiming to find acceptable solutions for all concerned.
- Be knowledgeable of and guide students through the graduate program's requirements/deadlines.
- Advise and assist with a student's thesis committee selection.
- Lead by example and facilitate training in complementary skills needed to for a successful career, such as communication, writing, management, and ethical behavior.
- Discuss authorship policies, acknowledge a student's research contributions, and work with students to aid in publishing their work in a timely manner prior to their graduation.

SELF-

Steps for creating your IDP



Assess your skills, values, and interests

Discuss and develop plan with mentor

- Open-ended and survey questions in self-assessment tools
- myIDP.org survey available for detailed values + interests assessment

Create self-assessment summary and goal priority

- Create achievable set of goals in yearly action plan - Create mentoring plan for working with committee

- Identify goals for the next year from assessment survey

2

Implement action plan

- Set and monitor progress on personal milestones for action plan goals



Revise and review as needed

- Sign, update as necessary



What are your current aspirations, goals, and responsibilities?

Aspirations

What is important to you?

What type of work would you like to pursue?

How well do your current skills match up with competencies required for your chosen career?

Personal & Professional Goals

What are your goals? - Long-term:

- Short-term:

What help would you need to achieve your goals?

What features of professional and collegial relationships are most helpful?

What help can your advisor or faculty provide for professional development and training?

How will you develop contacts related to your career goals?

How will you maintain wellness?

What concerns do you have about pursuing your goals?

Responsibilities

What responsibilities do you have in your program, and what is your plan to fulfill them?

What funding needs do you have?

Do you have access to orientation resources and transition support from your program?

What are important features of mentoring relationships for you?

This self-assessment survey allows you to evaluate your current strengths and weaknesses. Please check the boxes according to your ability (1 being low; 3 being high). Use these scores to guide your discussions with your advisor. You may identify targeted goals for this year by using the Goal checkboxes in the relevant skill categories.

EXPECTATIONS	2

INDIVIDUAL DEVELOPMENT PLAN

SELF-ASSESSMENT

Research Skills & Knowledge Broad-based knowledge of field	123 □□□	Goal	Management & Leadership Skills Providing instruction and guidance	123 □□□	Goal
Critical reading of literature in field			Providing constructive feedback		
Experimental/research design			Dealing with conflict		
Careful recordkeeping practices			Planning and organizing projects		
Understanding data ownership			Serving as a role model		
Demonstrating responsible conduct in (human/animal) research			Delegating responsibilities in research setting		
Identifying research misconduct			Leading and motivating others		
Effectiveness/Purpose	123 □□□	Goal	Professionalism Identifying and seeking advice	123 □□□	Goal
Maintaining openness and curiosity			identifying and seeking advice		
Being healthy (physically, emotionally, financially)			Upholding commitments & deadlines		
Effective time management			Maintaining positive relationships		
Maintaining personal motivation			Contributing to community/institution		
Fostering diversity of academic/ personal perspectives			Contributing to a team in office/lab		
Promoting inclusive workplaces/ classrooms			Maintaining network of peers		
Communication	123	Goal	Career Advancement	123	Goal
Writing for experts in my field			Building transferable skills		
Writing for a lay audience			Identifying career options		
Grant writing skills			Preparing application materials		
Speaking clearly and effectively			Interviewing skills		
Teaching in a classroom			Negotiating skills		
Editing your own work			Participating in professional service		
Collaborating on work/peer review			Taking long-term approach to career		

SELF-ASSESSMENT SUMMARY

Please complete this summary with information from your self-assessment on page 4.

EXPECTATIONS

University of Florida		NT PLAN	SUMMARY & GOALS			
Confident (3's)	Not Confident (1's)					

Goal Prioritization	Near term (within next 6 months)	Long term (more than 6 months away)
High Priority		
Low Priority		
Goals:		
Communication to		
discuss progress		

EXPECTATIONS

SELF-ASSESSMENT SUMMARY & GOALS

ACTION PLAN

SIGNATURE & PROGRESS

Activities	
Projected Timeline	
Financial Support	
Additional Actions	
Follow-up	
Other	
Progress	

Discuss your self-assessment summary and existing goals with your advisor. Develop an action plan based on this conversation, to address your target goals, skills, and competencies for the next 12 months. Write this plan together, with the aim of updating and revising it as you make academic and personal progress during your graduate career.

University of Florida

INDIVIDUAL DEVELOPMENT PLAN

MENTORING PLAN

	How often are you meeting?	Is this sufficient?	Do you initiate meetings?	Do you need help in organizing meetings?
Lead Mentor/ Graduate Coordinator				
Thesis Committee Group				
Thesis Committee One-on- one				
Collaborators				

Review and Revise your IDP

As you implement your IDP, remember to adjust your plans as your circumstances change. If necessary, meet with your advisor throughout the year, to discuss your progress and your achievements. Be sure to verify that your annual meeting with your advisor has been scheduled, and that previous meetings have been noted on your student record in GIMS.

Your name:

Today's date:

Advisor:

Today's date:

Annual Status Update

Please include below any updates on your progress over the course of the year that you would like to discuss at your next annual meeting with your advisor:

UF IDP Template Adapted From:

myIDP.org template: http://myidp.sciencecareers.org/

Stanford University Biomedical Sciences Individual Development Plan Template: <u>http://biosciences.stanford.edu/idp</u> University of Florida Public Health and Health Professions Individual Development Plan Template University of Wisconsin-Madison Graduate School Individual Development Plan Template: <u>https://grad.wisc.edu/pd/idp/</u>

SUMMARY & GOALS

ACTION PLAN

Why Create an Individual Development Plan?

An individual development plan (IDP) helps you to align your personal and professional goals with your academic expectations and responsibilities. Developing a plan will give you critical information for building the skills, knowledge, and resources necessary to for your career, and to prepare you for meaningful personal or professional opportunities after graduation.

UF's IDP template will be customized to your program's specific context. The template is comprised of a self-assessment of your current skills and interests, a summary of your goals for the upcoming year based on your self-assessment, and an action plan to shape your skillset, created in conjunction with your advisor.

How Will an IDP Guide My Progress?

Your IDP will serve as a guide to your annual progress meetings with your advisor, to ensure progress is made towards your personal and professional goals. Each year, you can develop a revised IDP, based on an updated assessment of your goals and skills, as well as the progress you make throughout your career, to create attainable steps for fulfilling long-term goals.

How Can I Use This Template?

Please take the time to complete the IDP template to the best of your ability soon after your arrival at UF. It's ok if you are unable to provide clear answers on parts of the IDP template; the document is mean to guide you in formulating a plan for your future, and any questions that arise can be addressed in your first meeting with your advisor. Also, schedule a meeting with your advisor or graduate coordinator early in your first semester at UF, to discuss your goals and expectations for your time at UF.

The IDP document is meant to complement the creation of your academic plan of study, which will outline the measures for academic success in your program. To ensure that both the IDP and your plan of study are coordinated, students and advisors each have a set of expectations, which are listed below, to support your progress towards your degree:

EXPECTATIONS

Student

- Take primary responsibility for the successful completion of my degree.
- Meet regularly with my advisor and provide her/him with updates on the progress and results of my activities.
- Establish a shared understanding of satisfactory progress with my advisor.
- Work with my research advisor to develop a thesis/ dissertation project and select a committee.
- Actively seek out advice and feedback from my advisor, committee, and other mentors.
- Remain informed of the policies and requirements of my graduate program, and the University of Florida.
- Attend and participate in department meetings and seminars.
- Maintain knowledge of original literature in my field.
- Be a good research collaborator, maintaining a safe, clean, and collegial academic and work environment.
- Discuss policies on work hours, sick leave, and vacation with my advisor.
- Discuss expectations on authorship and attendance at professional meetings with my advisor.

Advisor

- Be committed to a student's education and training as a future member of the research community.
- Be committed to guiding a student's research project, allowing them to take ownership of their research.
- Encourage students to set reasonable goals and establish a timeline for completion.
- Provide and seek regular and honest feedback on an ongoing basis.
- Commit to improving as a mentor.
- Be open to students by encouraging them to bring concerns to you, while aiming to find acceptable solutions for all concerned.
- Be knowledgeable of and guide students through the graduate program's requirements/deadlines.
- Advise and assist with a student's thesis committee selection.
- Lead by example and facilitate training in complementary skills needed to for a successful career, such as communication, writing, management, and ethical behavior.
- Discuss authorship policies, acknowledge a student's research contributions, and work with students to aid in publishing their work in a timely manner prior to their graduation.

Steps for creating your IDP

SUMMARY & GOALS

University of Florida INDIVIDUAL DEVELOPMENT PLAN







Assess your skills, values, and interests

- Open-ended and survey questions in self-assessment tools
- myIDP.org survey available for detailed values + interests assessment

Create self-assessment summary and goal priority

- Identify goals for the next year from assessment survey

Discuss and develop plan with mentor

- Create achievable set of goals in yearly action plan
- Create mentoring plan for working with committee

Implement action plan

- Set and monitor progress on personal milestones for action plan goals







Revise and review as needed

- Sign, update as necessary

This self-assessment survey allows you to evaluate your current strengths and weaknesses. Please check the boxes according to your ability (1 being low; 3 being high). Use these scores to guide your discussions with your advisor. You may identify targeted goals for this year by using the Goal checkboxes in the relevant skill categories.

Research Skills & Knowledge Broad-based knowledge of field	1 2 3	Goal	Management & Leadership Skills Providing instruction and guidance	123 □□□	Goal
Critical reading of literature in field			Providing constructive feedback		
Experimental/research design			Dealing with conflict		
Careful recordkeeping practices			Planning and organizing projects		
Understanding data ownership			Serving as a role model		
Demonstrating responsible conduct in (human/animal) research			Delegating responsibilities in a research setting		
Identifying research misconduct			Leading and motivating others		
Effectiveness/Purpose Maintaining openness and curiosity	1 2 3 □ □ □	Goal	Professionalism Identifying and seeking advice	123 □□□	Goal
Being healthy (physically, emotionally, financially)			Upholding commitments & deadlines		
Effective time management			Maintaining positive relationships		
Maintaining personal motivation			Contributing to community/institution		
Fostering diversity of academic/ personal perspectives			Contributing to a team in office/lab		
Promoting inclusive workplaces/ classrooms			Maintaining network of peers		
Communication Writing for experts in my field	123 □□□	Goal	Career Advancement Building transferable skills	1 2 3 □ □ □	Goal
Writing for a lay audience			Identifying career options		
Grant writing skills			Preparing application materials		
Speaking clearly and effectively			Interviewing skills		
Teaching in a classroom			Negotiating skills		
Editing your own work			Participating in professional service		
Collaborating on work/peer review			Taking long-term approach to career		

SELF-ASSESSMENT SUMMARY

Please complete this summary with information from your self-assessment on page 4. *Confident (3's)* Not Confident (1's)

Goal Prioritization

Near term (within next 6 months)

Long term (more than 6 months away)

High Priority

Low Priority

EXPECTATIONS

Discuss your self-assessment summary and existing goals with your advisor. Develop an action plan based on this conversation, to address your target goals, skills, and competencies for the next 12 months. Write this plan together, with the aim of updating

Goals:	
Communication to discuss progress	
Activities	
Projected Timeline	
Financial Support	
Additional Actions	
Follow-up	
Other	
Progress	

and revising it as you make academic and personal progress during your graduate career.

EXPECTATIONS

Review and Revise your IDP

As you implement your IDP, remember to adjust your plans as your circumstances change. If necessary, meet with your advisor throughout the year, to discuss your progress and your achievements. Be sure to verify that your annual meeting with your advisor has been scheduled, and that previous meetings have been noted on your student record in GIMS.

Your name:

Today's date:

Advisor:

Today's date:

Annual Status Update

Please include below any updates on your progress over the course of the year that you would like to discuss at your next annual meeting with your advisor:

UF IDP Template Adapted From:

myIDP.org template: <u>http://myidp.sciencecareers.org/</u> Stanford University Biomedical Sciences Individual Development Plan Template: <u>http://biosciences.stanford.edu/idp</u> University of Florida Public Health and Health Professions Individual Development Plan Template

University of Wisconsin-Madison Graduate School Individual Development Plan Template: <u>https://grad.wisc.edu/pd/idp/</u>

SUMMARY & GOALS

UF UNIVERSITY of FLORIDA

M.E. Rinker, Sr. School of Construction Management P.O. Box 115703 University of Florida Gainesville, FL 32611-5703 PH: 352.273.1150