

Virginia Tech

Department of Accounting and Information Systems

Ph.D. Program

GENERAL INFORMATION

Virginia Tech's Doctoral Program in Accounting and Information Systems is a Ph.D. degree in Business Administration with a concentration in Accounting and Information Systems. The program is administered by the Doctoral Committee of the department and the University Graduate School. It is a research-oriented academic degree. Accordingly, the program has a strong research orientation. At the same time, attention is also directed to the development of the necessary skills conducive to excellence in classroom teaching. Typically, the entire program requires approximately four years for candidates who enter with the necessary prerequisites (i.e. have their Master's degree in hand). Other students may require approximately one additional year (depending upon their prior academic degree) to complete the prerequisites prior to entering the doctoral program. Only full-time students are admitted into the program. All students are admitted in Fall semester. Each student is very strongly encouraged to complete all degree requirements in residence.

Admission decisions are based on the applicant's overall background and perceived potential to become a professor at a high quality university. Important factors include professional work experience; written and verbal communication skills; GMAT scores; letters of recommendation; campus interview; prior grades, with emphasis on the last two years of study; and other factors that may indicate an applicant's ability to be successful in the program and become a productive and successful professor at a major university. The same criteria apply to international applicants, except that applicants who speak a native language other than English must have an acceptable score on the TOEFL examination and meet the Virginia Tech Graduate School requirements for oral and written communication in English. The TOEFL requirement is waived for students who have earned an undergraduate or graduate degree from an accredited university in the USA.

FINANCIAL AID AND GRADUATE ASSISTANTSHIPS:

Graduate assistantships are awarded to all doctoral students unless special circumstances exist. The graduate assistantship includes a full tuition waiver and comprehensive fee scholarship from private endowment money. Stipends average \$2,667 monthly for nine months (\$24,003). All Departmental doctoral students also receive yearly scholarships averaging \$10,000. In addition, doctoral students can request to teach one (or possibly two) section(s) during one six-week summer session to increase their overall remuneration (approximately \$5,500 each section) giving most students an income of approximately \$39,500 in addition to their tuition and comprehensive fee. Students on assistantships have half-time appointments in research or teaching, and must enroll for a minimum of nine hours of course work each semester. All PhD students on assistantships receive a **full tuition waiver** and the payment of their comprehensive fee. For information purposes, regular graduate student tuition and fees for the 2017-2018 academic year are \$15,072 for two semesters for in-state candidates (\$28,810 out of state) enrolled for nine or more hours.

Additional dissertation funding is available to students from a number of sources, both inside and outside the University. Several external organizations award dissertation grants, and a few organizations make grants available for research on specific topics. These can also serve as a funding source for dissertations. Students are encouraged to apply for outside funding for the dissertation phase of their program of study.

A typical graduate assistantship assignment over the four year program usually finds the student teaching two sections of introductory level material. The next year is usually spent on research assignment in which the Ph.D. student works directly with a faculty member in his/her area of interest. During this period the student learns the art and science of research and how to produce manuscripts to submit to quality journals for publication. The third and fourth years find the Ph.D. student back in the classroom while the student works on dissertation requirements during the fourth year.

PROGRAM OF STUDY

Because of the research orientation of the degree, consideration is given to the fundamental nature of and trends in accounting and information system-related research activities. Such research has become increasingly interdisciplinary, drawing upon the theories and research results of other disciplines, including economics, finance, psychology, operations research, philosophy of science, computer science, human factors, and artificial intelligence systems. This infusion of varied research approaches and knowledge bases into accounting and information systems problems and issues has broadened the boundaries of inquiry.

Diversity of interest is therefore encouraged in the program. A maximum of flexibility is provided for the tailoring of individual programs of study to fit the backgrounds and research interests of each student.

Doctoral students develop a program of study in consultation with the Doctoral Committee. The program must include, but need not be limited to, 90 semester hours of graduate level coursework, and research and dissertation credit. Doctoral candidates at the dissertation stage are required to enroll for a minimum of 6 semester hours of coursework and/or research and dissertation credit during the summer.

In addition to the minimum requirements listed below, each doctoral student is expected to have completed all training in his or her field of specialization (e.g., income tax, information systems). This prerequisite may be met by a combination of undergraduate and master's level courses. Moreover, because of the quantitative requirements of the program, each student should have completed appropriate mathematical education, such as analytic geometry, and differential and integral calculus. The program of study is approved by the entire Doctoral Committee, the Department Head, and the Graduate School. In accordance with Graduate School requirements, courses that are more than seven years old when the degree is to be granted cannot be included in the program of study. Such courses must be revalidated, which may entail retaking the written preliminary examination. Changes to a student's program of study are made through a formal request to, and approval by, the Doctoral Committee, the Department Head, and the Graduate School.

Minimum Requirements beyond Master's level		
Accounting courses	Research Methods in Accounting and Information Systems	3 hours
	Accounting and/or Information Systems Seminars	9 hours
	Independent study	3 hours
Statistics courses		15 hours
Supporting area courses	Graduate courses in: economics, finance, psychology, organizational behavior, computer science, industrial systems, engineering, etc.	12 hours
<i>Approximate coursework</i>		<i>42hours</i>
Dissertation	Minimum research and dissertation credit	48 hours
<i>Minimum program hours</i>		<i>90 hours</i>

* Graduate level courses in the candidates' area of specialization.

Enclosures at the end of this description contain sample programs of study that meet the above requirements. It should be emphasized that these listings are samples, and actual programs of study are tailored to each individual candidate.

COMMITTEES

The Doctoral Committee establishes standards for acceptable programs of study and serves as the **student advisory committee** throughout the coursework phase. It develops, administers, and supervises the grading of the written preliminary examination. The Doctoral Committee ceases to be the advisory committee when the candidate has passed the preliminary examination and has a dissertation committee approved by the Graduate School. The dissertation committee then monitors the candidate's progress directly, while the Doctoral Committee monitors only the enrollment and time limits that apply. In accordance with Graduate School policy, changes in candidate committees are granted upon approval of both old and new committee members.

EXAMINATIONS

All candidates for the Ph.D. in Business Administration with a concentration in Accounting and Information Systems must pass a preliminary written examination, usually during the last semester of coursework. The examination is taken over a two-day period. The first day's examination is the same for all candidates and is more general in nature. The second day is individualized according to a candidate's area of specialization. In general, examination questions will be structured to test the student's broad-based conceptual knowledge base, as well as the ability to utilize this knowledge to:

- X analytically differentiate among distinct dimensions of a problem or issue in accounting, auditing, information systems, or taxation
- X integrate seeming unrelated propositions and arguments into a logical framework
- X communicate effectively in a scholarly manner.

The preliminary examination is compiled by the Doctoral Committee from questions submitted by the faculty, and graded by faculty members under the supervision of the Doctoral Committee. If the student's supporting area requires a preliminary examination that too must be passed in a satisfactory manner.

Upon completion of the dissertation, the doctoral candidate is required to pass an oral dissertation defense conducted by the dissertation committee at a scheduled meeting open to the public.

DISSERTATION PROPOSAL

The candidate selects a dissertation committee no later than the semester following successful completion of the preliminary examination. A dissertation proposal is developed under the guidance of the dissertation chairman. As the proposal develops, other committee members are identified as necessary to plan the research. The committee, which must include a minimum of five faculty members, is appointed by the Graduate School upon recommendation of the Department Head.

A dissertation proposal should summarize the motivation for the research and the development of the problem. It should also include a review of relevant literature and a description of the research methodology to be followed, including data collection and analysis techniques, as well as any necessary pretesting. Either prior to or concurrent with the dissertation proposal defense, the candidate will schedule a seminar with the Seminar Series Committee to present the proposal to the faculty and other graduate students. This seminar allows the candidate and the dissertation committee to obtain feedback from those who are not members of the dissertation committee. The candidate, in consultation with the dissertation committee members, will evaluate all comments offered during the seminar and make any necessary changes in the proposal. A successful defense requires the signatures of all dissertation committee members on a copy of the title page of the dissertation proposal. This copy is retained in the departmental office as a permanent record of the successful dissertation proposal defense.

Candidates are expected to defend their proposals before the faculty and doctoral students within one year after completing the preliminary examination. If the candidate does not defend the dissertation proposal successfully within one year, the dissertation committee may be disbanded and financial support from the department may be discontinued. If the dissertation committee is disbanded, the candidate must petition the Doctoral Committee for permission to continue in the doctoral program.

The candidate may proceed with the dissertation only after successfully defending the dissertation proposal. During the dissertation stage, data are collected and analyzed according to the plan set out in the dissertation proposal. If the dissertation is not completed within two years after passing the preliminary examinations, the committee may be disbanded. In that event, the student will have to petition the Doctoral Committee for permission to continue.

The dissertation should demonstrate the candidate's ability to conduct scholarly research. This can be demonstrated by completion of a traditional dissertation or, with the permission of the candidate's dissertation chairman, by selecting and completing a "three-paper" dissertation option. Under the three paper option the candidate will produce three separate papers that will be submitted for publication to quality academic journals. In addition, these three papers will be accumulated into a dissertation along with introductory and conclusion chapters. The primary purpose of the three-paper option is to help the candidate obtain a position on the faculty at a quality university, and prepare the candidate for a career that involves scholarship and publication of original research. Scholarly research can be either applied or basic--both are acceptable forms for the dissertation. The topics selected and the issues researched must be meaningful ones within the area selected and within the form of research selected. That is, there must be identifiable unresolved questions or issues that are related to an existing body of theory or knowledge. The research topic should be sufficiently complex that it challenges the candidate's abilities and knowledge, consistent with the stated objectives of the Accounting and Information Systems Ph.D. program. Given the importance of publishing in tenure and promotion decisions, and the time frame for review and acceptance, it is extremely important that the candidate strive to select a topic that is substantive enough to yield one or more manuscripts with a high probability of acceptance to scholarly journals. Ideally, the topic will be an identifiable segment or phase of a broader integrated program of research that the candidate will pursue and build upon in future research activities. On the other hand, the dissertation must be sufficiently limited in scope to permit completion within a reasonable period of time.

RESIDENCE

Candidates are strongly encouraged to complete the entire ACIS PhD program in residence. The Graduate School requires that at least one full academic year and at least 15 hours of coursework, not including research hours, be in residence. The time limits indicated above apply whether or not the candidate is in residence.

PARTICIPATION IN DEPARTMENTAL SEMINARS

All doctoral candidates in residence are **required** to prepare for and attend scheduled departmental seminars. Preparation includes careful reading of any preliminary materials (manuscript, outline, etc.) and writing down questions raised by the reading for discussion at the seminar. Participation in Seminars is considered an integral part of the doctoral program at Virginia Tech. Seminars are often conducted on Friday afternoons, and students should plan to be available for these from the start of each semester until after graduation is completed.

ANNUAL EVALUATION

The evaluation of doctoral students in accounting and information systems is usually conducted at the end of the second semester of each academic year. Its purpose is to assure that the student is proceeding in a timely fashion toward completion of program requirements. This evaluation involves the review of courses taken, grades earned, and progress made to date. The basis of this review is an annual evaluation form that is completed by each student, the student's grade reports, and other evidence of progress. If necessary, a meeting will be scheduled with the student to discuss the committee's evaluation and to answer the student's questions. The annual evaluation form becomes part of each student's file. If at any time the student fails to make satisfactory progress toward the degree, permission to continue may be denied. In accordance with Graduate School policy, this denial decision may be reached by the advisory committee and/or the Department Head, and recommended to the Graduate School. A grade of less than B in any course in the program of study is viewed as less than satisfactory unless the student can demonstrate a conceptual knowledge of the material through other means. The Doctoral Committee may also request a conference with any student during the academic year.

POLICY FOR OBTAINING A SUPPORTING AREA IN ACCOUNTING

Doctoral students in departments other than accounting and information systems can elect accounting and information systems as a supporting area. The policy of the Department of Accounting and Information Systems with respect to a supporting area selection is that the student should:

- X Identify an Accounting and Information Systems department representative to serve on his or her advisory committee.
- X Work with the department representative to arrive at a tentative program of accounting and information systems courses.
- X Submit the tentative program of courses to the Doctoral Committee of the Department of Accounting and Information Systems for approval.

The purpose of this policy is to establish departmental input into the planning of a supporting area in accounting and information systems, and to protect students from unforeseen changes in their programs due to changes in department representatives serving on student advisory committees.

INQUIRIES

Dr. Reza Barkhi, Chair, Ph.D. Committee
Department of Accounting and Information Systems
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Virginia Tech
Blacksburg, VA 24061 email (reza@vt.edu)

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Sample 1 - Financial/Economics-Based Emphasis-Sample Program of Study

		Semester Hours	Total
ACCOUNTING COURSES			
ACIS 6004	Research Methods in Accounting	3	
ACIS 6014	Behavioral Research in Accounting Seminar	3	
ACIS 6024	Financial Capital Markets in Accounting Seminar	3	
ACIS 5974	Independent Research Study with subject area professor	3	
	<i>Total Accounting Hours</i>		12
STATISTICS COURSES and SUPPORTING COURSES			
STAT 5214G	Advanced Regression Analyses	3	
FIN 6984	Financial Research Methodology	3	
FIN 6985	Econometrics	3	
AAEC 5804	Fundamentals of Econometrics	3	
ECON 5125	Empirical Research Methods in Economics	3	
STAT 5664	Applied Time Series	3	
FIN 6115	Corporate Finance Seminar I	3	
FIN 6116	Corporate Finance Seminar II	3	
FIN 6125	Investments I	3	
FIN 6125	Investments II	3	
	<i>Total Supporting Hours</i>		30
DISSERTATION			
ACIS 7994	Research and Dissertation		48
	<i>Total Program Hours</i>		90

The above program assumes that the candidate has the prerequisite knowledge in accounting. The prerequisite accounting knowledge includes principles, intermediate, and advanced financial accounting information. In addition, the candidate should also possess prerequisite basic practical knowledge of managerial accounting, income taxes, and auditing.

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Sample 2 – Managerial/Auditing/Behavioral-Based Emphasis- Sample Program of Study

		Semester Hours	Total
ACCOUNTING COURSES			
ACIS 6004	Research Methods in Accounting	3	
ACIS 6014	Behavioral Research in Accounting Seminar	3	
ACIS 6024	Financial Capital Markets in Accounting Seminar	3	
ACIS 6504	Information Systems Seminar ¹	3	
ACIS 5974 ²	Independent Research Study with subject area professor	3	
	Total Accounting Hours		15
STATISTICS COURSES			
STAT 5214G	Advanced Regression Analyses	STAT 5214G	
FIN 6984	Financial Research Methodology	FIN 6984	
FIN 6985	Econometrics	FIN 6985	
AAEC 5804	Fundamentals of Econometrics	3	
	1 Statistics Elective	3	
	Total Statistics Hours		15
SUPPORTING AREA COURSES			
PSYC 5315 ³	Research Methods	3	
PSYC 5344	Cognitive Psychology	3	
	At least 2 Psychology Electives ⁴	6	
	Total Supporting Hours		12
DISSERTATION			
ACIS 7994	Research and Dissertation		48
	Total Program Hours		90

NOTE:

¹Depending on the student's interests, the Information Systems Seminar could be replaced with a seminar offered by the Management Department. Possible seminars include: MGT 6315, Seminar in Organizational Behavior; MGT 6305, Seminar in Strategic Management

²The independent study could be done over the summer.

³This course may not be needed if the material is covered in ACIS 6004.

⁴Possible electives include: PSYC 5125-5126, Organizational Psychology; PSYC 5314, Psychological Perspectives in Social Psychology; PSYC 5344, Cognitive Psychology; PSYC 5354, Information Processing

Prerequisites:

Prerequisites such as ACIS 5115, Accounting Theory, ACIS 5214 (Advanced Managerial Accounting), and ACIS 5414 (Auditing Theory) can be decided on an individual student basis. The above program assumes that the candidate has the prerequisite knowledge in accounting. The prerequisite accounting knowledge includes principles, intermediate, and advanced financial accounting information. In addition, the candidate should also possess prerequisite basic practical knowledge of managerial accounting, income taxes, and auditing.

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Sample 3 - Income Tax/Economics-Based Emphasis- Sample Program of Study

[Note: The Tax option could follow either an Economics or a Behavioral emphasis. If the student elects a behavioral emphasis, s/he should look at the behavioral option for more details of a representative program of study.

		Semester Hours	Total
ACCOUNTING COURSES			
ACIS 6004	Research Methods in Accounting	3	
ACIS 5314	Tax Planning and Research	3	
ACIS 5974	Independent Research Study with subject area professor	3	
ACIS 6014	Behavioral Research in Accounting Seminar	3	
ACIS 6024	Financial Capital Markets in Accounting Seminar	3	
	<i>Total Accounting Hours</i>		15
STATISTICS COURSES			
STAT 5214G	Advanced Regression Analyses	3	
FIN 6984	Financial Research Methodology	3	
FIN 6985	Econometrics	3	
AAEC 5804	Fundamentals of Econometrics	3	
STAT 5664	Applied Time Series	3	
	<i>Total Statistics Hours</i>		15
SUPPORTING AREA COURSES*			
ECON 5125	Empirical Research Methods in Economics I	3	
ECON 5126	Empirical Research Methods in Economics II	3	
FIN 6115	Corporate Finance Seminar I	3	
ECON 6204	Public Economics	3	
	<i>Total Supporting Hours</i>		12
DISSERTATION			
ACIS 7994	Research and Dissertation		48
	<i>Total Program Hours</i>		90

*Supporting area may also consist of Finance courses similar to those in Illustration 1.

Prerequisites:

If a student enters the Ph.D. program without a Masters in Taxation, s/he will need to develop an appropriate background in the taxation area. This would involve a variety of Master's level courses such as ACIS 5324, 5334, 5344. The actual number of courses and content can be determined on an individual student basis. The above program assumes that the candidate has the prerequisite knowledge in accounting. The prerequisite accounting knowledge includes principles, intermediate, and advanced financial accounting information. In addition, the candidate should also possess prerequisite basic practical knowledge of managerial accounting and auditing

Sample 4 – Information Systems Option- Sample Program of Study

		Semester Hours	Total
INFORMATION SYSTEMS COURSES			
ACIS 6004	Research Methods in Accounting and Information Systems	3	
ACIS 6014	Behavioral Research in Accounting Seminar	3	
ACIS 6504	Information Systems Seminar	3	
BIT 6414	Current Topics in Business Information Technology	3	
ACIS 5974	Independent Research Study with subject area professor	3	
	<i>Minimum Information Systems CORE Hours</i>		15
STATISTICS COURSES			
STAT 5214G	Advanced Regression Analyses	3	
FIN 6984	Financial Research Methodology	3	
FIN 6985	Econometrics	3	
AAEC 5804	Fundamentals of Econometrics	3	
	<i>Minimum Statistics Hours</i>		12
SUPPORTING AREA COURSES²			
	Depends on Student's background and Research Emphasis	12	
	<i>Minimum Supporting Area Hours</i>		12
	<i>Minimum Course Hours Beyond Masters Degree</i>		39
DISSERTATION			
ACIS 7994	Research and Dissertation		51
	<i>Minimum Total Program Hours</i>		90

The above program assumes that the candidate has the prerequisite knowledge in information systems. The prerequisite information systems knowledge would include computer programming, database management, distributed processing and networking computer security electronic commerce and web application development, object oriented systems development, and systems analysis and design. If the student does not have this prerequisite knowledge, **additional** course work will be required. For example, in addition to the above requirements, the student could be required to take:

ACIS 4554: Networks & Telecommunications in Business ACIS 4564: Object-Oriented Systems Development
 ACIS 5504: Information Systems Design & Database Concepts ACIS 5524: Advanced Database Management
 ACIS 5534: Information Systems Development ACIS 5554: Applied Software Development Project
 ACIS 5584: Electronic Commerce Security ACIS 5594: Web-Based Applications & Electronic Commerce

1The courses in Advanced Statistics could include STAT 5504: Applied Multivariate Analysis, STAT 5644: Nonparametric Statistical Methods, and EDRE 6664: Application of Structural Equations in Education. However the number of and specific required courses would be based on the students/ background and determined by the student's advisor/committee.

2The supporting area courses could include ACIS 6015: Behavioral Accounting Seminar, ISE 5604: Human Information Processing, and PSYC 5344: Cognitive Psychology, if the student has a behavioral research interest. Alternatively, ACIS 6016: Financial Accounting Seminar, ECON 5005: Prices Markets, and Resource Allocation, and FIN 6004: Introduction to Financial Theory, if the student has an economics research interest. Again, the actual number of and specific required courses would be based on the students/ background and determined by the student's advisor/committee.

The above program of study is also subject to the degree requirements contained in the Graduate Catalog. This includes a minimum of 90 semester hours of graduate study and dissertation, a minimum of 27 hours of courses numbered 5000 or higher, a minimum of 30 hours of research and dissertation, a maximum of 18 hours of special and/or independent studies, a minimum of 24 graduate-level credit hours must be taken in residence, and no more than 42 semester hours of graduate credit can be transferred in for purposes of meeting the 90 semester hour

requirement above. The plan of study should be submitted for approval before the candidate completes 15 credit hours in the PhD program.