

DEPARTMENT OF ENGLISH

Dr. Mark Smith, Acting Head

Room 207, West Hall

The Department of English offers four programs of study that lead to a B. A. degree in English and two programs that lead to an M. A. degree in English. The Department also offers minors in English, Journalism, Creative Writing, and Professional Writing.

The programs in the English Department build upon the basic knowledge, skills, and values provided by the University Core Curriculum while preparing students for a wide range of careers as well as for graduate study in numerous fields. The Traditional Track provides a pre-law and pre-theology education as well as prepares students for graduate study in English. The Journalism Track prepares students for careers in print journalism, editing, and in-house news writing. The Creative Writing Track prepares students for graduate study as well as careers in publishing and related fields. The Professional Writing Track also prepares students for graduate study as well as careers in law, business, advertising, and publishing. Students in every Track are encouraged to gain work experience related to their major through internships or the VSU Cooperative Education Program. Each of the Department's Tracks emphasizes the importance of critical thinking skills, encourages an appreciation of diverse cultural perspectives, and develops a greater understanding of the cognitive, emotive, and aesthetic dimensions of language as an avenue of self-knowledge, cultural understanding, and social responsibility.

Each program in the English Department has numerous desired outcomes. Examples of these outcomes include the following:

BACHELOR OF ARTS DEGREE WITH A MAJOR IN ENGLISH

Selected Educational Outcomes

1. To develop a basic knowledge of British, American, and world literatures and an ability to respond to them critically.
2. To write and speak with clarity, precision, and sophistication.
3. To research carefully and systematically, utilizing the appropriate computer technology, and to apply that research to the study of language and literature.
4. To foster a greater understanding of the cultural and historical contexts of written communication.

ESOL ENDORSEMENT

The English to Speakers of Other Languages (ESOL) Endorsement provides credentials to teach English as a second language in Georgia. An ESOL endorsement can be pursued by undergraduate or graduate students working toward possessing certification in a teaching field (T-4 certification) or in speech and language pathology or by students working toward possessing certification in school counseling, provided that a teaching field has been established. Students add the ESOL endorsement by

completing the following courses: LING 4000/ENGL 6000 (Elements of Linguistics), LING 4160/ENGL 6000 (Sociolinguistics), and FLED 4600/6800 (Methods and Materials for Teaching ESOL).

Requirements for the Bachelor of Arts with a Major in English

Core Curriculum Areas A-E* (See VSU Core Curriculum) **42 hours**

Core Curriculum Area F* **18 hours**

ENGL 2060 3 hours

ENGL 2110, 2120, or 2130 3 hours

(Student may choose one of the above courses
not taken in Area C.)

Foreign Language and Culture through 2002 6-12 hours

ART 1100, COMM 1100, MUSC 1100, THEA 1100, HIST 1011,

HIST 1012, HIST 1013, PHIL 2010, PHIL 2020 0-6 hours

* All core classes with an ENGL prefix (ENGL 1101, ENGL 1102, ENGL 2060, ENGL 2110, ENGL 2120, ENGL 2130, and ENGL 2140) must be completed with a grade of “C” or better.

Traditional Track

Senior College Curriculum **60 hours**

Courses required for the Major 39 hours

ENGL 3110, ENGL 3120, ENGL 3210 9 hours

ENGL 3060 3 hours

(prerequisite or corequisite to all 4000-level courses)

ENGL 3080 or ENGL 3090 3 hours

One British period course (ENGL 4110-4150) 3 hours

One American period course (ENGL 4210-4240) 3 hours

One genre course 3 hours

(ENGL 4320, 4330, 4340, 4350, 4410, or 4420)

Four 3-hour electives from ENGL, CRWR, JOUR, or LING

(one Foreign Language literature course

numbered 4000 or above may be substituted) 12 hours

ENGL 4900 Senior Seminar 3 hours

Minor and/or Elective courses 21 hours

Must include at least 6 hours of courses numbered

3000 or above in a single discipline outside of ENGL.

Total hours required for the degree **120 semester hours**

Or

Journalism Track

Senior College Curriculum **60 hours**

Courses Required for the Major 40 hours

ENGL 3110, ENGL 3120, ENGL 3210 9 hours

JOUR/ENGL 3080 3 hours

ENGL 3400, JOUR 4500 6 hours

ENGL 3600 1 hour

JOUR 3510, JOUR 3540, JOUR 3570	9 hours
JOUR 3520	1 hour
Two electives from the following list	6 hours
JOUR 4510, JOUR 4520, JOUR 4550, CRWR/ENGL 3-hr writing course	
JOUR 2500 and/or JOUR 4800	3-12 hours
ENGL 4900	3 hours
Minor and/or elective courses	19 hours
Must include at least 6 hours of courses numbered 3000 or above in a single discipline outside of JOUR.	

Total hours required for the degree 120 semester hours

Or

Professional Writing Track

Senior College Curriculum 60 hours

Courses required for the Major	40 hours
ENGL 3110, ENGL 3120, ENGL 3210	9 hours
ENGL 3010, ENGL 3020, or ENGL 3030	3 hours
ENGL 3080, ENGL 3090	6 hours
ENGL 3600	1 hour
ENGL/JOUR 4500	3 hours
ENGL 4600, ENG 4620, ENG 4630	9 hours
Elective in CRWR, JOUR, or LING	3 hours
CS 1000 or CS 1010	3 hours
ENGL 4900	3 hours
Minor and/or Elective Courses	20 hours
Must include at least 6 hours of courses numbered 3000 or above in a single discipline outside of ENGL.	

Total hours required for the degree 120 semester hours

Or

Creative Writing Track

Senior College Curriculum 60 hours

Courses required for the Major	40 hours
ENGL 3110, ENGL 3120, ENGL 3210	9 hours
ENGL 3060	3 hours
(prerequisite or corequisite to all 4000-level courses)	
ENGL 3080 or ENGL 3090	3 hours
One British Period course (ENGL 4110-4150)	3 hours
One 20th-Century American literature course	3 hours
One 4000-level ENGL course	3 hours
ENGL 3600 Professional Writing	1 hour
ENGL/CRWR 3400 Creative Writing	3 hours
One three-course CRWR sequence	9 hours
CRWR 3440, CRWR 4440, ENGL/CRWR 4410 or CRWR 3460, CRWR 4460, ENGL/CRWR 4420 or CRWR 3420, ENGL/JOUR 4520, ENGL/CRWR 4420	
ENGL 4900	3 hours

Minor and/or Elective courses 20 hours

Must include at least 6 hours of courses numbered 3000
or above in a single discipline outside CRWR.

Total hours required for the degree 120 semester hours

Students should review the Arts and Sciences requirements for completion of the B.A. degree.

The English Department assesses the extent to which its program requirements create the desired outcomes by using a variety of techniques. Examples of these assessments (and the related educational outcome) include the following.

Examples of Outcome Assessments

1. Students will submit a portfolio of written work.
2. Students will take a 100-item test of basic knowledge in a capstone course, ENGL 4900.
3. Students will complete a five-page Undergraduate English Major Exit Questionnaire.

Institutional Cross-training Certificate for Journalism and Mass Media Students

To earn a institutional certificate, students who are earning a minor in print journalism or who are majoring in English with a journalism emphasis will be required to pass the following courses with a grade of “C” or better:

MDIA 3050 Broadcast Performance and Announcing

MDIA 3500 Broadcast News Writing

MDIA 4960 (1-2 hrs) Performance and Production Workshop

To earn a institutional certificate, students who are earning a minor or major in mass media will be required to pass the following courses with a grade of “C” or better:

JOUR 3510 News Writing

JOUR 3520 (1 hr) Essential Reporting Skills

JOUR 4510 or 4520 or 4550 Feature Writing, Literary Journalism, Reporting

Minor in Creative Writing 15 hours

CRWR/ENGL 3400 3 hours

One two-course CRWR sequence: 6 hours

Chosen from CRWR 3440 and CRWR 4440
CRWR 3460 and CRWR 4460
CRWR 3420 and JOUR/ENGL 4520

Two ENGL electives at the 3000 or 4000 level 6 hours

Minor in English 15-18 hours

ENGL 2140 (if not taken in Area C or F) 3 hours

ENGL 3110, ENGL 3120, ENGL 3210 9 hours

Two electives numbered 3000 or above 6 hours
from ENGL, CRWR, JOUR, or LING

Minor in Journalism 18 hours

JOUR/ENGL 3080 3 hours

JOUR 3510, JOUR 3540, JOUR 3570, JOUR 4500 12 hours

One elective from the following list: 3 hours
JOUR 4510, JOUR 4520, JOUR 4550

Minor in Professional Writing 16 hours

ENGL 3010, ENGL 3020, or ENGL 3030 3 hours

ENGL 3600 1 hour

ENGL 3080, ENGL 3090, ENGL 4630 9 hours

One elective from the following list: 3 hours
ENGL 4600, ENGL 4620, ENGL/JOUR 4500

BACHELOR OF GENERAL STUDIES DEGREE PROGRAM

Ms. Marsha Walden, Track One Coordinator

1114 University Center

Dr. Brian Adler, Track Two Coordinator

2 Brookwood Circle, The VSU Honors House

There are two tracks within the General Studies degree program

Track One meets the specific needs of adult students who have been away from school for a period of time but who wish to return and complete a degree. Students can enter Track One of the program with courses credits obtained at VSU, or other schools, in military training programs, or through certain standardized tests. Admission to Track One is based on the following eligibility requirements: Students must either (a) be in the military on active duty, or (b) document a continuous two-year period in which they were working full-time and not taking university courses.

Track Two allows students to build an interdisciplinary program from the ground up, offering an opportunity to explore vital connections among disciplines that will lead to exciting and far ranging results. It is often at the intersection of disciplinary boundaries that new work is being done, which will have substantial benefits to the individual pursuing these studies, as well as to society, where broad thinkers who can synthesize disparate materials are usually welcome. For the student who has a desire to develop a more personalized educational program, one that moves beyond the boundaries of the traditional major, the Bachelor of General Studies, Track Two, is the place to begin exploration and conversation. Faculty advisors from appropriate departments of the university provide curriculum guidance. Working closely with both the General Studies Track Two Coordinator and faculty advisors, students prepare individual programs of study consistent with their own plans and expectations. Admission to Track Two must occur prior to the completion of the last 30 semester hours before graduation. Students must also have a minimum grade point average (GPA) of 2.50 in order to be admitted to Track Two. This GPA is based on all course work, including transfer courses.

In both Track One and Track Two of General Studies, students, with the assistance of program advisors, will define three areas of concentration, either in traditional disciplines or in multidisciplinary fields, in which they wish to specialize. Their remaining upper-division coursework can then be focused in these areas.

The objectives of General Studies are (a) to encourage students to investigate combinations of disciplines that are not connected in traditional programs and (b) to give students a role in the guided design of the upper-division courses of study.

Selected Educational Outcomes (Track Two)

1. Students will be able to articulate reasons for the interconnectedness of their chosen fields of study.
2. Students will demonstrate knowledge in depth as well as in breadth through a selected range of their fields of study.
3. Students will demonstrate critical, analytical, and synthesizing skills that characterize exploration beyond disciplinary boundaries.

4. Students will engage in professionally oriented activities geared toward individual career or post-graduate goals.

Core Curriculum Areas A-E (See VSU Core Curriculum) **42 hours**

Track One

Core Curriculum Area F (Courses appropriate to the major) 18 hours

- Eighteen (18) hours* of lower-division from the following areas:
- Humanities and Fine Arts [course(s) not taken in Area C] 3-9 hours
- Social Sciences [course(s) not taken in Area E] 3-9 hours
- Mathematics and Sciences [course(s) not taken in Area D] 3- 9 hours
- Any course approved by advisor in Areas C - F 0-9 hours

or

Track Two

Core Curriculum Area F (Courses appropriate to the major) 18 hours

- Eighteen (18) hours* of lower-division from the following areas:
- Foreign Language and Culture courses 6 hours
- GENS 2000 3 hours
- Courses approved by general advisor in Areas B-F that
have an interdisciplinary approach 9 hours

*All courses must be completed with a grade of “C” or better.

Track One

Courses Required for the General Studies Major 60 hours

Students choose one of the following options:

- (a) Primary Concentration 21 hours
 - 1st Secondary Field of Study 12 hours
 - 2nd Secondary Field of Study 12 hours
 - Free Electives 12 hours
 - GENS 4100 or GENS 4900 3 hours
- (b) Emphasis Area One 15 hours
 - Emphasis Area Two 15 hours
 - Emphasis Area Three 15 hours
 - Free Electives 12 hours
 - GENS 4100 or GENS 4900 3 hours

In each concentration and emphasis, one course may be at the 1000-2000 level; all others must be at the 3000-4000 level. All courses must be completed with a grade of “C” or better.

or

Track Two

Courses Required for the General Studies Major

With Particular Interdisciplinary Concentrations 60 hours

- 1st Related Field of Study 18 hours
- 2nd Related Field of Study 15 hours
- 3rd Related Field of Study 12 hours
- GENS 4000 (3 hours) Guided Electives (12 hours) 15 hours

In each field, one course may be at the 1000-2000 level; all others must be at the 3000-4000 level. All courses must be completed with a grade of “C” or better. Once a program of study is approved, a student who wishes to alter that program must secure approval from all advisors concerned and the General Studies Track Two Coordinator.

Total hours required for the degree 120 semester hours

Examples of Outcome Assessments

1. Student-generated planning documents for the related fields of study.
2. Portfolios of student work.
3. Progress reports generated by faculty advisors meeting with the student.
4. Student entrance and exit interviews.

HEALTH PROFESSIONS

Advised by the Department of Biology
Room 2035 Biology-Chemistry Building

Most programs in the health professions require four years of study to complete the degree requirements that are prerequisite for eligibility to take licensing or certification exams. Valdosta State University provides two- or three-year pre-professional programs in the allied health fields listed below.

After completing one of these junior college curricula, students may qualify for the Associate of Arts degree from Valdosta State University and are eligible to apply for admission to an appropriate institution for completion of the professional training required for the baccalaureate degree.

Students interested in academic work in preparation for admission to institutions where the professional training can be completed will be advised in the Department of Biology.

Community Health Nutrition
Dental Hygiene
Medical Records Administration
Medical Technology
Occupational Therapy
Optometry

Pathologist’s Assistant
Pharmacy
Physical Therapy
Physician Assistant
Respiratory Therapy

DEPARTMENT OF HISTORY

Dr. Paul Riggs, Head
Room 210, Ashley Hall North

The Department of History provides an undergraduate program that leads to the Bachelor of Arts degree with a major in history. The Department also offers a minor in history.

The undergraduate major and minor in the Department of History are designed to help students to further and to complete their general education by building upon the foundation that is afforded by the University's Core Curriculum. The programs also provide students with the basic knowledge, skills, and values required for professional careers in history and for advanced study in the field. The program is a flexible one that presents students with opportunities to supplement the major by taking one or two minors or even a second major.

History's scope is extremely broad, and people and their institutions form a particular focus of the discipline. The use of language and the ability to communicate skillfully also are concerns of history. Thus, the study of history prepares students for many different occupations and professions in which such qualities are essential.

Traditionally, teaching has been a career possibility, but, as well, graduates of the program in history are prepared to enter graduate school for further study, to seek employment in business or government, in museums and libraries, in publishing, journalism, and advertising, or to enter the military, politics, or theology. A degree in history is excellent preparation for business school or law school.

Students who are interested in the history major or who have questions about the vocational possibilities of the major should consult with members of the Department of History in Ashley Hall.

B.A. DEGREE WITH A MAJOR IN HISTORY

The Bachelor of Arts program with a major in history has numerous desired outcomes. Examples of the outcomes include the following:

Selected Educational Outcomes

1. Students will demonstrate knowledge of major political developments in history.
2. Students will demonstrate knowledge of major social developments in history.
3. Students will communicate effectively in writing and orally.
4. Students will demonstrate the ability to engage in critical analysis and historical interpretation.

**Requirements for the Bachelor of Arts Degree with
a Major in History**

Core Areas A - E (See VSU Core Curriculum) **42 hours**

Core Area F **18 hours**

Foreign Language and Culture¹ 6 hours

HIST 1011 or HIST 1012 or HIST 1013 3 hours

HIST 2111 or HIST 2112 3 hours

Electives 6 hours

HIST 1011/HIST 1012/HIST 1013, if not taken in Area E.

If one or two are taken in Area E, choice of one or two of the following:

ANTH 1102, CS 1000, ECON 1500, GEOG 1101, GEOG 1102,

GEOG 1103, MATH 2620, PHIL 2010, POLS 2101, POLS 2401,

POLS 1102, PSYC 2500, REL 2010, SOCI 1101, SOCI 1160

¹Only two of three required courses in a single foreign language can be taken in Area F. The third course must be taken in Area C or in the Senior College.

Senior College Curriculum **60 hours**

HIST 3000 3 hours

Upper division courses in History 24 hours

Courses numbered above 3000, including at least one each in: a) European or British History; b) United States History; c) Latin American, African, or Asian History

HIST 4950 3 hours

Foreign Language and Culture 0-3 hours
(if not taken in Area C)

Minor and/or Electives 27-30 hours

Must include at least six (6) semester hours in courses numbered 3000 or above in a single discipline outside the history major.

Total hours required for the degree **120 semester hours**

Examples of Outcome Assessments

1. As a matter of established departmental policy, all upper division courses require written work in the form of essays, research papers, and other similar projects that help determine progress in written communication skills, analytical and interpretive skills, and mastery of course content.
2. Senior Seminar is designed to measure student progress in the program in the mastery of effective oral and written communication, the acquisition of skills in critical analysis and historical interpretation, and the ability to make effective use of library resources and computer and information technology.
3. When such information is available, the department will use as an assessment tool the results of University-wide collection of data that relate to the major and to History Department graduates.

The Minor in History **15 hours**
 Core Curriculum Courses HIST 1011, 1012, 1013 0-6 hours²
 (if not taken in Area E)
 Upper Division History Courses 9-15 hours
² Only 6 semester hours of the HIST 1011, 1012, 1013
 sequence can be taken in Core Area E.

<p>INTERNATIONAL/INTERCULTURAL STUDIES Dr. C. Tracy Harrington, Director of International Programs 204 Georgia Avenue</p>
--

The Center for International Programs offers a multidisciplinary minor in International Studies, which is designed to meet two objectives: (1) provide students with a fundamental understanding of international studies as an academic field and the dynamics involved in international issues and concerns, and (2) provide students with a substantial exposure to a specific world region, transnational problem, or disciplinary speciality that is international in scope.

Selected Educational Outcomes

1. To clearly describe the parameters of international studies as a field of inquiry and practice, both in historic perspective and current usage;
2. To evaluate career possibilities that are international in nature as well as the most suitable educational paths to those careers;
3. To appreciate the complexities of cultural differences and the impact of these differences on cross-cultural understanding;
4. To apply the tools of research to a major international and inter-disciplinary problem, issue, or phenomenon;
5. To express thorough knowledge of a particular international problem, world region, or international dimension of an academic discipline.

The minor in International Studies consists of (1) a core component that is required of all students taking the minor and (2) a minor concentration tailored to individual student interests and backgrounds.

Minor in International Studies 15 hours

Core requirements INTL 2090 and INTL 4800 6 hours

Minor concentration 9 hours

Must include at least 6 hours of upper-division coursework. The concentration consists of three courses related either to a particular world region of interest to the student, to an international problem or issue, or to the comparative application of a particular discipline. Students' selection of courses must be approved by a designated advisor within their major as well as by the Director of International Programs. Courses within the concentration may be distributed as follows:

1. Existing courses within the curriculum that address the region, international problem, or disciplinary dimension of interest to the student 0-9 hours
2. Completion of a language course at the intermediate level or above appropriate for the focus of the student's concentration 0-3 hours
3. Special topics courses compatible with the student's approved concentration 0-6 hours
4. The Model United Nations course (INTL 3170), if the focus of the course is appropriate to the student's concentration: 0-6 hours
5. Completion of a study abroad experience relevant to the student's approved concentration: 0-6 hours

Students pursuing the multidisciplinary minor in international studies must meet with the Director of International Programs and their College's International Studies Advisors, who will assist them in the selection of courses for the multidisciplinary program.

EUROPEAN UNION STUDIES CERTIFICATE

Dr. Michael Baun, Campus Representative
247 West Hall

The certificate in European Union Studies is operated under the supervision of the European Council of the University System of Georgia. The program is open to all institutions and students of the University System as well as to professionals with an undergraduate degree. The program's purpose is to promote knowledge of the European Union (EU) and certify individuals as competent in the subject area of EU studies. Since the EU is the most important economic and political partner of the United States, this certification demonstrates valuable professional expertise to potential employers. For students in the academic track, the interdisciplinary certificate can be earned as a supplement to any conventional undergraduate degree.

Admission to the Program

A certificate in European Union Studies can be earned in one of two ways. Under the **academic track**, a certificate is taken in tandem with an undergraduate degree program. Students from all academic majors are eligible to participate so long as they possess a minimum 2.75 cumulative Grade Point Average (GPA). Under the **professional track**, non-degree students—such as business executives—are eligible to enroll in the program upon proof of a valid undergraduate degree from an accredited institution. The minimum GPA requirement is waived.

Under either track, an application to the program cannot be made until successful completion of the following: (1) the introductory course on the European Union (POLS 4380) with a grade of “C” or better, (2) 30 semester hours of academic credit, and (3) a course in World or Western Civilization (HIST 1011, 1012, or 1013).

The European Union Studies Certificate

To earn the EU Studies certificate, students must complete the certificate curriculum (18 hours) and fulfill the practicum experience requirement. Students must have a 3.0 cumulative GPA in curriculum courses upon completion of the program. An official certificate is awarded upon graduation, and the certificate is noted on a student's permanent transcripts.

Practicum Experience

Since it is deemed crucial that students demonstrate more than an academic knowledge of the European Union to be certified as adequately prepared in the subject, a “real-life” practicum experience pertaining to the EU must be performed either in the form of an overseas visit or an internship. The overseas option is broadly defined and can be accommodated by a wide range of activities, including study or research abroad. The same flexibility applies to the internship, which can be served domestically or internationally. A student's specific practicum experience must be approved by the program's campus representative.

The EU Studies Certificate Curriculum 18 hours

The European Union (POL5 4380).....3 hours

Multidisciplinary Menu.....12 hours

A student must complete 4 courses from an approved menu of courses dealing substantially with the EU. These courses must be distributed among at least three different discipline areas: Social Sciences, Humanities and Fine Arts, Business and Economics, and Natural and Health Sciences. The program’s campus representative decides which courses qualify for the certificate. No more than one course in this menu can be taken at the 1000-2000 level, with the exception of EU Studies online courses (see below) and study abroad courses. Students may substitute for up to two menu courses by performing an internship or composing a thesis.

Capstone Seminar in EU Studies3 hours

Taken either as a Directed Study (POL5 4700) or online course

Online Courses and Transatlantic Joint Certificate

The EU Studies program has developed a curriculum of online courses in conjunction with European university partners. These are courses in different discipline areas that deal with various aspects of the EU and are taught jointly by University System institutions and European universities at specified times throughout the academic year. The program’s campus representative maintains an updated list of these courses and a teaching schedule, as well as information about course registration.

The EU Studies program offers the option of acquiring a certificate that is jointly conferred with a European institution. This option requires students to complete—with a grade of “B” or better—a minimum of two online courses that are co-taught with European partner universities. Students completing this option have the EU Studies certificate awarded by both their home institution and one in Europe, thus giving them an academic credential from a respected European university.

Areas of Distinction

In addition to acknowledging competence in the EU generally, the certificate also highlights special achievements by providing a notation of “distinction” in two areas:

- foreign language proficiency (6 semester hours at or above the 2000 level)
- composition of a thesis

The foreign language distinction must be earned in a European language approved by the program’s campus representative as appropriate to the certificate’s objectives. A student with prior language skills can earn a distinction by successful completion of an examination demonstrating competence equivalent to the 2000 level. The exam is administered at the student’s home institution.

The thesis can be written anytime during the final year of study. It is supervised by a committee composed of three faculty members representing at least two different academic disciplines. The program’s campus representative maintains a more detailed description of thesis requirements.

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Dr. Ashok Kumar, Acting Head

Room 2121, Nevins Hall

The Department of Mathematics and Computer Science is a multidisciplinary department with programs leading to baccalaureate degrees in mathematics, applied mathematics, mathematics with computer-science option, computer science, and computer information systems. The department also supports two interdisciplinary degrees: a degree in mathematics that is offered in conjunction with the College of Education's program for secondary school teachers, and the Bachelor of Applied Science degree track in Applied Information Technology. Additionally, the department offers minors in mathematics, mathematics (statistics track), and computer science.

The programs in the department are designed to give the student the basic knowledge, skills, and values that build upon the foundation provided by the University Core Curriculum and that are required for professional careers in the mathematical and computing sciences. Moreover, through a series of sequenced courses, the department prepares the student for more advanced study, either at the graduate level or through company training programs. The requirements of the programs have been designed in keeping with national norms of excellence and according to well established model curricula where they exist. The major common feature shared by all the department's programs is the stress on critical thinking skills.

Students may gain work experience related to their major through the VSU Co-Op Program. Such experience may prove valuable in terms of career exploration, acquisition of new skills, and career development.

B. S. DEGREE WITH A MAJOR IN APPLIED MATHEMATICS

Selected Educational Outcomes

1. Students will learn the algebraic structures—groups, rings, fields, and their applications.
2. Students will learn the concepts of vector spaces, linear transformations, eigenvalues, and normed linear spaces. Further, they will learn to solve systems of linear equations.
3. Students will develop the logical reasoning skills and technical background necessary to do mathematical proofs. They will prove theorems in set theory, analysis, linear algebra, and abstract algebra.
4. Students will use mathematical software to solve problems in numerical analysis, operations research, and statistics. They will have “hands-on” experience in implementing algorithms.

REQUIREMENTS FOR THE B.S. DEGREE WITH A MAJOR IN APPLIED MATHEMATICS

Core Curriculum Areas A-E (See VSU Core Curriculum) **42 hours**
 (Applied Mathematics Majors are required to take Math 1113 in Area A and Math 2261 in Area D.)

Core Curriculum Area F **18 hours**
 MATH 2261 “spillover” from Area D 1 hour
 MATH 2262, MATH 2263 8 hours
 CS 1301 (3 credits “spill over” into “Supporting Courses”) 1 hours
 PHYS 2211K, PHYS 2212K 8 hours

Senior College Curriculum **60 hours**
 Courses Required for the Major 36 hours
 MATH 2150, MATH 3600, MATH 4621 9 hours
 MATH 3040, MATH 3340, MATH 4150 9 hours
 MATH 4081, MATH 4260, MATH 4651 9 hours
 MATH 4901, MATH 4910 6 hours
 One of the following: 3 hours
 MATH 3900, MATH 4622, MATH 4630,
 MATH 4652, MATH 4902
 Supporting Courses 6-9 hours
 CS 1301 “spillover” from Area F 3 hours
 Foreign Language & Culture Requirement 3-6 hours
 Electives 15-18 hours
 Must include at least 6 hours of courses numbered 3000 or above in a single discipline outside the major.

Additional Requirements and Notes

1. Students must complete 16 credits of laboratory science, including the calculus-based physics indicated in Area F.
2. A grade of “C” or better must be earned in all “Courses Required for the Major.” Also, a grade of “C” or better is required in MATH 1111, 1112, 1113, 2150, 2261, 2262, 2263, and CS 1301, if any of those courses are taken.
3. Students must complete a sequence of two courses in French, German, or Russian, either in “Supporting Courses” or in a combination of Area C and Supporting Courses. Minimum acceptable grades in the language courses are the same as minimum acceptable grades in the Core Curriculum.

Total hours required for the degree **120 semester hours**

SECONDDGREEINMATHEMATICS

The B.S. degree with a major in applied mathematics is available as a second bachelor's degree for students receiving the B.S.Ed. with a major in secondary education in the teaching field of mathematics, by completing CS 1301, MATH 3340, MATH 4260, MATH 4621, MATH 4651, and either MATH 4901 or MATH 4910 (whichever course was not taken to fulfill the requirements for the B.S.Ed. degree), and 3 credit hours chosen from MATH 3900, MATH 4622, MATH 4630, MATH 4652, MATH 4902.

The B.A. degree with a major in mathematics as a second bachelor's degree for students receiving the B.S.Ed. in with a major in secondary education in the teaching field of mathematics, by completing MATH 3340, MATH 4260, MATH 4621, MATH 4980, and 6 credit hours chosen from MATH 3010, MATH 4082, MATH 4300, MATH 4540.

Any of the following courses that are taken by the student must be completed with a grade of "C" or higher: MATH 1101, MATH 1111, MATH 1112, MATH 1113, MATH 1113H, MATH 2150, MATH 2261, MATH 2262, and MATH 2263, as well as all upper division MATH courses.

Students interested in graduating with the B.S.Ed. degree and either the B.S. degree with a major in applied mathematics or B.A. degree with a major in mathematics should consult the department head concerning the procedures to follow in applying for the second degree.

BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN COMPUTER SCIENCE

Selected Educational Outcomes

1. The student will demonstrate proficiency in data structures (arrays, records, stacks, lists, queues, trees, and graphs). The student will demonstrate knowledge of writing recursive and iterative algorithms, and will show familiarity with the analysis of algorithms.
2. The student will demonstrate knowledge of modern software-engineering principles by participating in the successful development of a practical software-engineering project and orally presenting it to the instructor.
3. The student will demonstrate knowledge of the basic structures and functions of modern computer systems both hardware and operating systems including multi-tasking, concurrency, memory management, and process synchronization.

**REQUIREMENTS FOR THE B.S. DEGREE WITH A
MAJOR IN COMPUTER SCIENCE**

Core Curriculum Areas A-E (See VSU Core Curriculum) **42 hours**

Majors in Computer Science are required to take Precalculus (MATH 1113) in Area A and Analytic Geometry and Calculus I (MATH 2261) in Area D.

Core Curriculum Area F **18 hours**

CS 1301 and 1302 and 2620 11 hours
 MATH 2261 “spillover” from Area D 1 hours
 MATH 2262 4 hours
 D.II.a Laboratory Science 2 hours
 (with 2 hours “spilling” into Supporting Courses)

Senior College Curriculum **60 hours**

Courses Required for the Major 36 hours
 CS 3101, CS 3102, CS 3410 9 hours
 CS 3520, CS 4345 6 hours
 CS 4321, CS 4330, CS 4500, CS 4900 12 hours
 Additional 4000-level credits
 of Computer Science 9 hours
 Supporting Courses 14-17 hours
 D.II.a Laboratory Science 2 hours
 (“spillover” from Area F)
 MATH 2150 and MATH 3600, and
 MATH 4651 or MATH 4901 9 hours
 Foreign Language & Culture Requirement .. 3-6 hours
 Electives 7-10 hours

Additional Notes:

1. The 12-hour lab science requirement must include a two course sequence. All three courses must be from Area D.2.a. Students not completing these requirements in their Core Curriculum must complete them with elective courses.
2. Students must receive a “C” or better in all of the lower-division mathematics and computer-science courses completed to satisfy the degree requirements.
3. Students must complete a sequence of two courses in a foreign language, in either Supporting Courses or a combination of Area C and Supporting Courses. Minimum acceptable grades in the language courses are the same as minimum acceptable grades in the Core Curriculum.

Total hours required for the degree **120 semester hours**

**BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN
MATHEMATICS WITH COMPUTER SCIENCE OPTION**

Selected Educational Outcomes

1. The student will have an understanding of the basic techniques and concepts of calculus and will be able to apply these techniques and concepts to solve problems.
2. The student will experience the use of some commercial software in solving problems in numerical analysis, operations research, statistics, and linear algebra. The student will also have “hands-on” experience in implementing computational work.
3. The student will know the concepts in boolean algebra and discrete structures and will be able to apply these concepts in computer science and mathematics.

**REQUIREMENTS FOR THE B.S. DEGREE WITH A MAJOR IN
MATHEMATICS WITH COMPUTER SCIENCE OPTION**

Core Curriculum Areas A-E (See VSU Core Curriculum) **42 hours**

Majors in Mathematics with Computer-Science Option are required to take Precalculus (MATH 1113) in Area A and Analytic Geometry and Calculus I (MATH 2261) in Area D.

Area F Courses Appropriate to the Major **18 hours**

MATH 2261 “spillover” from Area D 1 hour
MATH 2262, MATH 2263 8 hours
MATH 2150, CS 1301, CS 1302 9 hours
(with 2 additional “spillover” hours in “Supporting Courses”)

Senior College Curriculum **60 hours**

Courses Required for the Major 24 hours
MATH 3040, MATH 4081, MATH 4150, 9 hours
MATH 3600, MATH 4621 6 hours
MATH 4651, MATH 4901, MATH 4910 9 hours
Supporting Courses 23-26 hours
CS 1302 “spillover” from Area F 2 hours
CS 2620, CS 3101, CS 3102, CS 3410 12 hours
Other upper-division CS courses 6 hours
Foreign Language & Culture Requirement .. 3-6 hours
Electives 10-13 hours

Additional Requirements and Notes

1. If taken, a grade of “C” or better is required in MATH 1111, MATH 1112, MATH 1113, MATH 2150, MATH 2261, MATH 2262, MATH 2263, CS 1301, and CS 1302.
2. A grade of “C” or better must be earned in all Courses Required for the Major plus the CS courses listed in “Supporting Courses.”

3. Students must complete a sequence of two courses in French, German, or Russian in either Supporting Courses or a combination of Area C and Supporting Courses. Minimum acceptable grades in the language courses are the same as minimum acceptable grades in the Core Curriculum.
4. The two courses satisfying the 8-hour lab science requirements must be from Area D.2.a.

Total hours required for the degree 120 semester hours

BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN COMPUTER INFORMATION SYSTEMS

Selected Educational Outcomes

1. Computer-information-systems students will possess problem-solving skills directed toward analysis and design of information systems and computer software.
2. Computer-information-systems students will have a good foundation of knowledge of the accounting, marketing, and management environment.
3. Computer-information-systems graduates will be familiar with and have gained proficiency in the use of data structures, analysis of algorithms, and the design of combinatorial and sequential circuits for the solution of digital-oriented problems.

REQUIREMENTS FOR THE B. S. DEGREE WITH A MAJOR IN COMPUTER INFORMATION SYSTEMS

Core Curriculum Areas A-E (See VSU Core Curriculum) 42 hours

Core Curriculum Area F. 18 hours

CS 1010, CS 1301, CS 1302 11 hours

ACCT 2101-2102 6 hours

MATH 1261/1262 (or MATH 2261/2262) 1 hour

Note: There is a requirement in this program that a student complete a six-credit sequence of calculus. One credit in Area F can be devoted to these six credits of calculus.

Senior College Curriculum. 60 hours

Courses Required for the Major 33 hours

CS 2620, CS 3101, CS 3410, CS 4345 12 hours

One of CS 3102, CS 3320, CS 3335 3 hours

One of CS 4330, CS 4500, CS 4820 3 hours

CS 4121, CS 4321, CS 4721 9 hours

One of CS 4122, CS 4322, CS 4722 3 hours

One of CS 4123, CS 4323, CS 4723, CS 4900 3 hours

Supporting Courses	17-20 hours
Completion of the calculus sequence, MATH 1261-1262 (or MATH 2261-2262)	2-5 hours
MATH 2620 or MATH 3600	3 hours
Choose one of the following areas:	12 hours
Business:	
ECON 2106, MGNT 3250, MGNT 3300 plus either FIN 3350 or MKTG 3050	
OR	
Technical Communications:	
ENGL 3020, ENGL 3080, ENGL 3090, plus either COMM 1110 or COMM 2400	
Electives	7-10 hours

Additional Requirements:

1. No more than 4 hours of electives may be taken in courses offered by the College of Business Administration.
2. A grade of “C” or better must be earned in all Courses Required for the Major and all Supporting Courses.

Total hours required for the degree 120 semester hours

BACHELOR OF APPLIED SCIENCE DEGREE WITH A MAJOR IN TECHNICAL STUDIES - APPLIED INFORMATION TECHNOLOGY TRACK

The Bachelor of Applied Science (BAS) degree with a major in technical studies, applied information technology track, is designed for students who complete an approved career or cooperative information technology program, at least one calendar year long, leading to an Associate of Applied Science degree from a college or university, an Associate of Applied Technology degree from a Georgia technical institute, or an similar degree from an equivalent post-secondary institution. Upon completion of the associate degree and admission into the BAS program, the student will be granted up to 36 hours of credit toward the BAS degree. The Applied Information Technology track is designed to prepare its graduates to provide support for end users of computer software and hardware by (1) assisting businesses in the strategic planning process that includes analyzing current practice, conducting needs assessments, and developing technological solutions that facilitate business practice; (2) managing the technological change process within the organization; (3) installing and maintaining generic software applications; (4) customizing and managing customization of commercial software to fit the needs of individual businesses; and (5) providing technical support for designing and implementing computer networks and systems management.

Requirements for the B.A.S Degree with a Major in Technical Studies - Applied Information Technology Track

Core Curriculum Areas A-E. 42 hours

Core Curriculum Area F. 18 hours
(completion of an approved technical program of one calendar year or longer)

Senior College Curriculum. 60 hours

ACED 3400, ACED 4100, ACED 4300, ACED 4310 12 hours

ACED 4810, ACED 4820 6 hours

PSYC 3800 3 hours

CIT 3030, CIT 3320, CIT 4120, CIT 4125 12 hours

Guided Electives 9 hours

Supporting Courses 18 hours

(Completion of an approved technical program of one calendar year or longer. Combined with Area F for a total of up to 36 hours credit for technical program.)

Note: CS 1301 and CS 1302 (or equivalent) are prerequisites to all CS courses in the curriculum, and PSYC 2500 (or equivalent) is a prerequisite to PSYC 3800. Students are advised to take these courses, if not taken as part of the technical program, prior to applying for admission to the B.A.S. in Applied Information Technology program.

Total hours required for the degree 120 semester hours

BACHELOR OF ARTS DEGREE WITH A MAJOR IN MATHEMATICS

Selected Educational Outcomes

1. Students will be able to identify the similarities of results in single-variable calculus and multivariable calculus.
2. Students will acquire the logical reasoning skills and technical background necessary to understand mathematical proofs.
3. Students will learn concepts from the analysis courses including (but not limited to) the concepts of limit, continuity, derivative, integral, analytic functions, and metric spaces.

REQUIREMENTS FOR THE B.A. DEGREE WITH A MAJOR IN MATHEMATICS

Core Curriculum Areas A-E (See VSU Core Curriculum) 42 hours

Mathematics majors are required to take Precalculus (MATH 1113) in Area A and Analytic Geometry and Calculus I (MATH 2261) in Area D.

Core Curriculum Area F	18 hours
MATH 2261 “spillover” from Area D	1 hour
MATH 2262, 2263	8 hours
CS 1301	3 hours
(1 credit spills over into “Supporting Courses”)	
Part of 3-course sequence in French, German, or Russian	6 hours

Senior College Curriculum	60 hours
Courses Required for the Major	33 hours
MATH 2150, MATH 3600, MATH 4621	9 hours
MATH 3040, MATH 3340, MATH 4150	9 hours
MATH 4260, MATH 4081, MATH 4980	9 hours
Select 2 from: MATH 3010, MATH 4082, MATH 4300, MATH 4540	6 hours
Supporting Courses	1 hour
CS 1301 “spillover” from Area F	1 hour
Electives	26 hours
Must include at least 9 hours of courses numbered 3000 or above.	

Additional Requirements and Notes

1. The foreign language courses in area F must meet Arts and Sciences guidelines for the B.A. degree; furthermore, these courses, along with an additional language course either in Area C or in Electives, must constitute a 3-course sequence in French, German, or Russian. Minimum acceptable grades in the language courses are the same as minimum acceptable grades in the Core Curriculum.
2. If taken, a grade of “C” or better is required in MATH 1111, MATH 1112, MATH 1113, MATH 2150, MATH 2261, MATH 2262, MATH 2263, and CS 1301.

Total hours required for the degree **120 semester hours**

Minor in Computer Science **17 hours**

The Minor in Computer Science may be earned by completing the following courses with grades of C or better. CS 1301 (Principles of Computer Programming I), CS 1302 (Principles of Computer Programming II), CS 3101 (Computer Organization), CS 3410 (Data Structures), plus three additional credits of Computer Science at the 3000 level or above.

Minor in Mathematics (Statistics Track) **17 hours**

The Minor in Mathematics (Statistics Track) may be earned by completing:
 MATH 2262, MATH 2263, MATH 3600, MATH 4621
Plus one of the following courses:
 MATH 4622 or MATH 4630

Minor in Mathematics..... 17 hours

The Minor in Mathematics may be earned by completing:

MATH 2262, MATH 2263, MATH 3040, and MATH 3600

Plus one course from:

MATH 3340, MATH 4150, MATH 4081, MATH 4082

MATH 4651, MATH 4652, MATH 4910, MATH 4901

or MATH 4902

Outcome Assessments

The department assesses the extent to which the program requirements create the desired outcomes by using a variety of techniques. The assessment plan will feature a multi-faceted approach addressing two major areas of concern. Examples of these assessments include the following.

1. How well our graduates are prepared for their post-undergraduate endeavors, whether they choose immediate employment or graduate school; and
2. Collective student perceptions with respect to achievement of the program's stated educational outcomes.

In an effort to address concern (1), the department will examine alumni relation survey results of University graduates reported for the 1 and 5 year intervals after graduation. These results will furnish a snapshot of how well the respondents were prepared for future education or employment. These results will also relate student academic experiences in their major field of study. In addition, the University biannual "Summary Results of Students' Opinions..." will be examined to gather data that will offer feedback which is more program specific in nature. Our capstone course is designed to measure student progress since taking the Area-F mathematics courses in (a) mastering effective oral and written communication in mathematics, (b) acquiring critical-analysis skills, and (c) effectively using library and technological resources in solving non-routine problems.

Concern (2) will be addressed by administering a criterion referenced "program exit questionnaire" designed to measure student perceptions regarding accomplishment of program education outcomes within the framework of a five-option Likert scale. This survey will be administered to the student at the time of major coursework completion. In addition, student project work will be systematically evaluated to determine the degree of alignment between the performance of the program participants and the targeted educational outcomes.