#### **DEPARTMENT OF ENGLISH**



Dr. Mark Smith, 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 Literature and Language, Journalism, Creative Writing and Contemporary Literature, 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 Literature and Language 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 and Contemporary LiteratureTrack 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 English 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

- 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.

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*		
* All core classes with an ENGL prefix (ENGL 1101, ENGL 1102, ENGL 2060, ENGL 2080, ENGL 2110, ENGL 2120, ENGL 2130, and ENGL 2140) must be completed with a grade of "C" or better.		
Literature and Language Track Senior College Curriculum		
Total hours required for the degree120 semester hours  Or		
Journalism Track-Newspaper Emphasis  Senior College Curriculum		

707 m 2000 707 m 2710 707 m 2710
JOUR 3080, JOUR 3510, JOUR 3540 9 hours
JOUR 3570, JOUR 4500, CWCL 3400 9 hours
JOUR 35201-2 hours*
JOUR 2500 and/or JOUR 4800 3 hours
JOUR 4510 or JOUR 4540 3 hours
JOUR 4520 or JOUR 4560 3 hours
JOUR 4550 3 hours
ENGL4900 3 hours
* English majors not pursuing cross-training certificate must take course
for 2 hours to ensure exposure to skills for multimedia presentation
Minor and/or elective courses19-20 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 degree120 semester hours
Or
Journalism Track–Magazine Emphasis
Senior College Curriculum 60 hours
Courses Required for the Major
ENGL3110 or ENGL3120
ENGL 3210 or ENGL 3215 3 hours
JOUR 3080, JOUR 3510, JOUR 3540 9 hours
JOUR 3570, JOUR 4500, CWCL 3400 9 hours
JOUR 35201-2 hours*
JOUR 2500 and/or JOUR 4800 3 hours
JOUR 4510 or JOUR 4560 3 hours
JOUR 4520 or CWCL 3420 3 hours
JOUR 3560 3 hours
ENGL4900 3 hours
* English majors not pursuing cross-training certificate must take course
for 2 hours to ensure exposure to skills for multimedia presentation
Minor and/or elective courses
Must include at least 6 hours of courses numbered
3000 or above in a single discipline outside of JOUR.
Fotal hours required for the degree120 semester hours
Or
Professional Writing Track
Senior College Curriculum 60 hours
Courses required for the Major39 hours
ENGL 3110 or ENGL 3120 3 hours
ENGL 3210 or ENGL 3215 3 hours
ENGL 3010, ENGL 3020, JOUR 4500 9 hours
JOUR 3560 or JOUR 4510 3 hours
CWCL 3400, CWCL 3420 6 hours
ENGL 4600, ENGL 4620, ENGL 4630 9 hours
ENGL 4640, ENGL 4900 6 hours

Minor and/or Elective Courses21 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		
Or		
Creative Writing and Contemporary Literature Track		
Senior College Curriculum		
Courses required for the Major40 hours		
ENGL 3110, ENGL 3120 6 hours		
ENGL 3210, ENGL 3215 6 hours		
ENGL 3060		
(prerequisite or corequisite to all 4000-level courses)		
ENGL4150 or ENGL4160		
ENGL 4240 or ENGL 4250		
One 4000-level ENGL course		
CWCL 2500 1 hour		
CWCL 3400 3 hours		
One three-course CWCL sequence		
CWCL 3440, CWCL 4440, CWCL 4410; or		
CWCL 3460, CWCL 4460, CWCL 4420; or		
CWCL 3420, JOUR 4520 or JOUR 3560, CWCL 4430		
ENGL4900		
Minor and/or Elective courses20 hours		
Must include at least 6 hours of courses numbered		
3000 or above in a single discipline outside CWCL.		
Total hours required for the degree		

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 Writi	ng and Contemporary Literatu	ıre 15 hours
One two-course CW	CL sequence:	6 hours
Chosen from	CWCL 3440 and CWCL 4440	
	CWCL 3460 and CWCL 4460	
	CWCL 3420 and JOUR 4520 or	JOUR 3560
Two ENGL electives	at the 3000- or 4000-level	6 hours
Minor in Literature and	Language	15-18 hours
ENGL 2060 (if not ta	ıken in Area F)	0-3 hours
ENGL3110, ENGL3	120, ENGL 3210, ENGL 3215	12 hours
Elective numbered 3	6000 or above	3 hours

Minor in Journalism	18 hours
JOUR 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 4540,	
JOUR 4550, or JOUR 4560	

from ENGL, CWCL, JOUR, or LING



# ENGLISH TO SPEAKERS OF OTHER LANGUAGES (ESOL) ENDORSEMENT

Dr. Mark Smith, Head, Department of Engish Room 207, West Hall Dr. Victoria Soady, Head, Department of Modern and Classical Languages Room 128, West Hall

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 or possessing certification in any teaching field or in the service field of communication disorders (speech and language pathology). An individual in any other service field or in the leadership field must have established a teaching field in order to pursue the ESOL endorsement. An individual with a permit in foreign language is also eligible to add the ESOL endorsement.

## Requirements for the ESOL Endorsement

ESOL 4010 Applied Linguistics for ESOL Teachers	3 hours
ESOL 4020 Cultural Perspectives for ESOL Teachers	3 hours
ESOL 4030 Methods and Materials for Teaching ESOL	3 hours

## BACHELOR OF GENERAL STUDIES DEGREE PROGRAM



Ms. Marsha Walden, Coordinator 1114 University Center

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 miliary 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 couses 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. Studens will demonstrate critical, analytical, and synthesizing skills that characterize exploration beyond disciplinary boundaries.

individual career or post-graduate goals. Track One Eighteen (18) hours\* of lower-division from the following areas: Humanities and Fine Arts [course(s) not taken in Area C] ...... 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 Eighteen (18) hours of lower-division from the following areas: Courses\* approved by general advisor in Areas B-F that have an interdisciplinary approach ......9 hours \* Courses must be completed with a grade of "C" or better. Track One Students choose one of the following options: 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 

4. Students will engage in professionally oriented activities geared toward

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**

Room 2035 Bailey Science Center Room 3025 Bailey Science Center

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 listed below in preparation for admission to institutions where the professional training can be completed will be advised in the Department of Biology.

Community Health Nutrition Optometry

Dental Hygiene Pathologist's Assistant

Medical Records Administration Physical Therapy

Medical Technology Physician Assistant

Occupational Therapy Respiratory Therapy

### **Pharmacy**

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

## 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. A graduate program leads to the Master of Arts degree with a major 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.

## Honors Track for History Majors

The Honors Track in history allows students the option of pursing the major at a more challenging level. To enter the track, student must be history majors with an overall GPA of 3.0. They must have a 3.0 average in all history courses taken and must have completed HIST 3000 with a grade of "B" or higher. They must maintain an overall GPA of 3.0 and a GPA of 3.0 in the major.

Students must complete three courses from among the following options, with at least a grade of "B" in each:

HIST 3030H Honors Topics in U. S. History; HIST 3040H Honors Topics in European History; HIST 3050H Honors Topics in World History; HIST 4800H Honors Directed Study: Thesis.

Students completing the Honors Track in history will have it noted on their transcript.

## **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 Culture 6 h	ours
HIST 2111 or HIST 2112	ours
HIST 1011 (if taken in Area E, then elective from list below) 0-3 h	ours
HIST 1012 (if taken in Area E, then elective from list below) 0-3 h	ours
HIST 1013 (if taken in Area E, then elective from list below) 0-3 h	ours
Electives 0-6 h	ours
Acceptable electives for Area E	
ANTH 1102, CS 1000, ECON 1500, GEOG 1101, GEOG 1102,	
GEOG 1103, MATH 2620, PHIL 2010, POLS 2101, POLS 2401,	
POLS 2501, PSYC 2500, REL 2020, SOCI 1101, SOCI 1160	

<sup>\*</sup> All courses with the HIST prefix taken in Areas E and F must be completed with a grade of "C" or better.

<sup>1</sup>Only 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 as part of the the Senior College Curriculum (see below).

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, Middle Eastern, or	
Asian History; (d) Additional course from categories	
(a) or (c), above.	
HIST 4950	3 hours
Foreign Language and Culture	0-3 hours
(if not taken in Area C)	

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

#### **Examples of Outcome Assessments**

- 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.
- 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.



## INTERNATIONAL/INTERCULTURAL STUDIES

Dr. Ivan Nikolov, Director 204 Georgia Avenue

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.

- 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 ...... 18 hours Core requirements INTL 2090, INTL 4800, INTL 3500 ....... 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: Existing courses within the curriculum that address the region, international problem, or disciplinary dimension of interest to the student .....0-9 hours Completion of a language course at the intermediate level or above appropriate for the focus of the student's concentration ......0-3 hours Special topics courses compatible with the student's approved concentration ......0-6 hours The Model United Nations course (INTL 3170), if the focus of the course is appropriate to the student's concentration: .....0-6 hours Completion of a study abroad experience relevant to the student's

Students wishing to pursue the minor in international studies must have an overall GPA of 2.75 or better to remain in the program. Students pursuing the multidisciplinary minor must meet with the Coordinator for the Minor in International Studies and their College's International Studies Advisors, who will assist them in the selection of courses for the multidisciplinary program.

approved concentration: ..... 0-6 hours

#### **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.

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.

#### 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. Mylan Redfern, Head Room 218, Ashley 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 an interdisciplinary degrees in conjunction with the College of Education's program for secondary school teachers. 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

- Students will solve problems involving groups, rings, fields, and their applications.
- 2. Students will solve problems involving of vector spaces, linear transformations, eigenvalues, and normed linear spaces.
- 3. Students will exhibit the logical reasoning skills and technical background necessary to do mathematical proofs by proving theorems in set theory, analysis, linear algebra, and abstract algebra.
- 4. Students will use mathematical software and modeling to solve problems in numerical analysis, operations research, and statistics.

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

Core Curriculum Areas A-E (See VSU Core Curriculum)	
Core Curriculum Area F	
MATH 2261 "spillover" from Area D	
MATH 2262, MATH 2263 8 hours	
CS 1301 (3 credits "spill over" into "Supporting Courses") 1 hours	
PHYS 2211K, PHYS 2212K	
Senior College Curriculum. 60 hours	
Courses Required for the Major36 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:	
MATH 4622, MATH 4630, MATH 4652,	
MATH 4902, PHYS 3100, PHYS 4111,	
PHYS 4211, PHYS 4411	
Supporting Courses 6-9 hours	
CS 1301 "spillover" from Area F 3 hours	
Foreign Language & Culture	
Requirement3-6 hours	
Electives	
Must include at least 6 hours of courses numbered	
3000 or above in a single discpline 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 any foreign language, 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

#### SECOND DEGREE IN MATHEMATICS

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 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 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 is 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

- Students will adopt or create appropriate data structures and apply correct and
  efficient algorithms to write iterative and recursive programs using appropriate
  programming languages on different programming IDEs and across different
  programming platforms
- 2. Students will work in teams, following modern software engineering principles, to develop and present software systems.
- 3. Students will solve problems requiring that they analyze computer problems and optimize software design using their knowledge in computer organization and operating systems, including data representation, digital logic, hardware and instruction set design, 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)
Core Curriculum Area F
CS 1301 and 1302 and 262011 hours
MATH 2261 "spillover" from Area D 1 hours
MATH 2262 4 hours
D.II.a Laboratory Science
(with 2 hours "spilling" into Supporting Courses)
Senior College Curriculum
Courses Required for the Major39 hours
CS 3101, CS 3300, CS 3335, CS 3410 12 hours
CS 3520, CS 4345 6 hours
CS 4121, CS 4321, CS 4721,
CS 4500, CS 490015 hours
Additional 3000-level or 4000-level
courses in CS 3 hours
Additional 4000-level courses in CS 3 hours
Supporting Courses
D.II.a Laboratory Science
("spillover" from Area F)
MATH 2150 and MATH 3600, and
MATH 4651 or MATH 4901 9 hours
Electives

## **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.

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

# BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN COMPUTER INFORMATION SYSTEMS

## **Selected Educational Outcomes**

- Students will analyze case studies and solve problems requiring that they assess hardware, software, and networking needs for information processing in the corporate environment.
- 2. Students will do projects requiring that they apply their knowledge in accounting, marketing, and management to the design, development, and maintenance of information systems.
- Students will use their skills in data structures, program design, and algorithm analysis to solve information system problems through programming, system configuration, and system simulation.

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

Core Curriculum Areas A-E (See VSU Core Curriculum)		
Core Curriculum Area F		
Senior College Curriculum.	60 hours	
Courses Required for the Major	33 hours	
CS 3101, CS 3410, CS 4345	9 hours	
One of CS 3300, CS 3320, CS 3335, CS 3340	3 hours	
CS 4121, CS 4321, CS 4721	9 hours	
One of CS 4122, CS 4322, CS 4722	3 hours	
Two of any 3000-level or 4000-level course not		
required above (excluding CS 3000 and CS 300	1) 6 hours	
One of any CS 4000-level course		
not required above	3 hours	
Supporting Courses		
Completion of the calculus sequence,		
MATH 1261-1262 (or MATH 2261-2262)2-5 hours		
MATH 2620 or MATH 3600		

### **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 Area F courses and core curriculum lower-level math courses, all courses required for the major, and all supporting courses.

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

# BACHELOR OF ARTS DEGREE WITH A MAJOR IN MATHEMATICS

- Students will explain and produce mathematical proofs in set theory, algebra, and analysis to indicate that they have acquired the necessary logical reasoning, reading and writing skills.
- Students will prove statements, produce examples, and apply the appropriate theoretical results to a given problem to show understanding of various algebraic structures, including, but not limited to, groups, fields, rings, and vector spaces.
- Students will prove statements, produce examples, and apply the appropriate theoretical results to a given problem to demonstrate understanding of the analytic structure necessary for the classical (real-valued function) calculus and its generalization.
- Students will synthesize the results and techniques of the various major branches
  of mathematics, demonstrated by presentation of mathematics in written and oral
  form.

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

Core Curriculum Areas A-E (See VSU Core Curriculum)
Core Curriculum Area F
MATH 2261 "spillover" from Area D 1 hour
MATH 2262, 2263 8 hours
CS 1010 or CS 1301 or CS 1340 3 hours
(1 credit spills over into "Supporting Courses")
Part of 3-course sequence in any foreign language 6 hours
Senior College Curriculum
Courses Required for the Major33 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 3510,
MATH 4082, MATH 4300, MATH 4540 6 hours
Supporting Courses
CS 1301 "spillover" from Area F 1 hour
Electives26 hours
Must include at least 9 hours of courses numbered 3000 or above.

## **Additional Requirements and Notes**

- 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 any foreign language. 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

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.

All courses for the minor must be completed with a grade of "C" or better.

## **Examples of Outcomes Assessments**

The department assesses the extent to which the program requirements create the desired outcomes by a variety of techniques. Examples of these assessments include the following:

- The capstone courses are used to assess student progress since taking Area F courses. They determine if students have mastered effective oral and written communication skills, acquired critical analysis skills, and learned to use the library and technological resources in solving non-routine problems. Assessment methods include student projects and presentations.
- 2. Student examinations and samples of student work are kept in the department and are examined by the faculty to assess student content knowledge.
- Available student and alumni survey data collected by the University will be examined to determine student satisfaction with their undergraduate preparation for further education or employment.