BS-Information Technology-Major Code: 1044

Concentration Codes: C033 Programming_____ C034 Networking_____ C037 Security_____ C039 General_____ C051 Data Analytics_____ 

This degree is available in a guaranteed 8-semester plan for qualified freshmen. See your advisor to declare your major and sign an official degree plan.

The prerequisites and corequisites of the degree requirements are subject to change.

MATH/ENGL prerequisite/co-requisite courses if student does not meet placement requirements:

**Prerequisites:** ENGL0263 _______ MATH 0233_______ MATH 0304 ______

**Corequisites:** ENGL 0201______ MATH 0301 ________

**FRESHMAN YEAR- FALL SEMESTER: 16 hours**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hours</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>English composition requirement</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 2804 Calculus I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CS 1044 Foundations of Networking</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CS 1014 Foundations of Programming I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>STEM 1001 College Prep for STEM Majors</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**FRESHMAN YEAR- SPRING SEMESTER: 15 hours**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hours</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 1024 Foundations of Programming II</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CS 1033 Foundations of Operating Systems I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CS 2022 IT Systems Management</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>SPCH 1203 Intro to Speech Communication</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>English composition requirement</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**SOPHOMORE YEAR- FALL SEMESTER: 16 hours**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hours</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 1063 Foundations of Operating Systems II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CS 2003 Data Structures</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CS 2013 Database Systems I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 1903 Introductory Discrete Math</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Lab Science requirement</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**SOPHOMORE YEAR- SPRING SEMESTER: 16 hours**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hours</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 2033 Web Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CS 2043 Database Systems II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>STAT 2503 Probability and Statistics I or MATH 2854 Calculus II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Lab Science requirement</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Fine Arts/Humanities/Social Sciences requirement</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**JUNIOR YEAR- FALL SEMESTER: 15 hours**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hours</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 3003 Distributed Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CS 3503 IT Security</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CS 3103 Algorithm Design or CS 3223 Routing and Switching</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Concentration requirement/CS elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>History/Government Requirement</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**JUNIOR YEAR- SPRING SEMESTER: 15 hours**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hours</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 3013 Human Computer Interaction</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CS 3023 Research Methods in Information Tech</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CS 3113 Artificial Intelligence or</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
CS 4213 Identity Management 3 Hours Note 2 Grade___
Concentration requirement/CS elective 3 Hours Note 2 & 3 Grade___
Fine Arts/Humanities/Social Sciences requirement 3 Hours Note 1 Grade___

SENIOR YEAR- FALL SEMESTER: 15 hours

Courses
CS 3033 Computer Architecture 3 Hours Note 2 Grade___
CS 4003 Systems Analysis and Design 3 Hours Note 2 Grade___
Concentration requirement/CS elective 3 Hours Note 2 & 3 Grade___
Concentration requirement/CS elective 3 Hours Note 2 & 3 Grade___
Fine Arts/Humanities/Social Sciences requirement 3 Hours Note 1 Grade___

SENIOR YEAR- SPRING SEMESTER: 12 hours

Courses
CS 4023 Senior Capstone 3 Hours Note 2 & 4 Grade___
Concentration requirement/CS elective 3 Hours Note 2 & 3 Grade___
Concentration requirement/CS elective 3 Hours Note 2 & 3 Grade___
Fine Arts/Humanities/Social Sciences requirement 3 Hours Note 1 Grade___

Total Hours: 120 At least 40 hours must be upper-level

NOTES
1. General Education Core requirements, see below on the last page.
2. These courses are used to determine major courses in residency, see Graduation Requirements section of this catalog.
3. Concentrations/CS Electives, 18 hours. Select two nine-hour concentrations, or one nine-hour concentration and nine hours of upper-level CS electives, or the data analytics concentration for 18 hours, or the general concentration with eighteen upper-level CS elective hours with approval from advisor.
4. Requires a grade of C or higher.
5. Consult with advisor to select either STAT 2503 or MATH 2854.

Prior to graduation students must demonstrate competency in financial literacy by satisfactory completion of FIN 1521 Personal Finance Applications (or an approved substitution) with a grade of C or better, or by a score of 70% or more on a challenge exam for FIN 1521.

Depending on the Concentration you choose see below for course choices:

Programming C033
Select three courses from the following:

Courses
CS 3123 Business Application Programming I 3 Hours Note 2 Grade___
CS 3133 Business Application Programming II 3 Hours Note 2 Grade___
CS 3143 Game Design and Development 3 Hours Note 2 Grade___
CS 3403 .Net Application Programming 3 Hours Note 2 Grade___
CS 3533 Assembly Language Programming 3 Hours Note 2 Grade___
CS 3543 Systems Programming 3 Hours Note 2 Grade___
CS 4103 Mobile Application Development 3 Hours Note 2 Grade___
CS 4133 Cloud Application Development 3 Hours Note 2 Grade___
CS 4143 Advanced Artificial Intelligence 3 Hours Note 2 Grade___
CS 4153 Advanced Algorithms 3 Hours Note 2 Grade___
CS 4933 Competitive Programming 3 Hours Note 2 Grade___

Networking C034
Select three courses from the following:

Courses
CS 3233 Network Services 3 Hours Note 2 Grade___
CS 4223 Computing at Scale 3 Hours Note 2 Grade___
CS 4233 Advanced Routing 3 Hours Note 2 Grade___
CS 4503 Network Security 3 Hours Note 2 Grade___
Select three courses from the following:

**Courses**
- CS 3513 Applied Cryptography   3 Hours  Note 2  Grade_____
- CS 3523 Computer Forensics   3 Hours  Note 2  Grade_____
- CS 3543 Systems Programming   3 Hours  Note 2  Grade_____
- CS 4503 Network Security   3 Hours  Note 2  Grade_____
- CS 4523 Cyber Crimes   3 Hours  Note 2  Grade_____

**General C039**

Courses
Select any six upper-level CS elective courses with advisor approval.   18 Hours  Note 2  Grade_____

**Data Analytics C051**

Courses
Select six courses from the following:
- CS 3323 Computer Graphics   3 Hours  Note 2  Grade_____
- CS 3333 Big Data   3 Hours  Note 2  Grade_____
- CS 4153 Advanced Algorithms   3 Hours  Note 2  Grade_____
- CS 4323 Data Analytics   3 Hours  Note 2  Grade_____
- CS 4333 Machine Learning   3 Hours  Note 2  Grade_____
- CS 4343 Natural Language Processing   3 Hours  Note 2  Grade_____
- CS 4933 Competitive Programming   3 Hours  Note 2  Grade_____
- STAT 3503 Mathematical Statistics I   3 Hours  Note 2  Grade_____
- MATH 3203 Applied Linear Algebra   3 Hours  Note 2  Grade_____
- MATH 4443 Combinatorics   3 Hours  Note 2  Grade_____

Transfer Course Information

The Arkansas Course Transfer System (ACTS) contains information about the transferability of courses within Arkansas public colleges and universities. Students are guaranteed the transfer of applicable credits and the equitable treatment of the application of credits for the admissions and degree requirements. Courses transferability is not guaranteed for courses listed in ACTS as “No Comparable Courses.” ACTS-Arkansas Course Transfer System [http://acts.adhe.edu](http://acts.adhe.edu) -select Course Transfer. See Acceptance of Transfer Credits section of the current academic catalog for a complete list of transfer provisions.

Student Degree Program Requirements

A student’s degree program requirements are those specified in the catalog in effect at the time of declaration of program major. If not on the Guaranteed 8-semester degree plan, students may choose to meet the program requirements specified in the catalog for a later year from when they began their program of study. Students must meet the above program requirements and the graduation requirements as indicated by institutional and college policy. The program can be changed only with the approval of the official advisor.

If original courses are eliminated, students may be required to meet new curriculum requirements in the degree program. If students are not enrolled for two or more consecutive terms (excluding summer terms), they must re-enter under the program requirements of the current catalog. Students are responsible for understanding program requirements and changes.

Guaranteed 8-Semester Degree Completion Program Pursuant to Act 1014 of 2005, qualified first-time freshmen with a declared major may elect to participate in the guaranteed 8-semester degree completion program. Students must follow the above degree plan and meet all requirements as outlined in the Guaranteed 8-semester Degree Completion Program contract. The contract and this degree plan must be signed and filed with the advisor before the first day of classes for the student’s first term of attendance. The official copy of the contract and degree plan are filed in the Records Office.

Approved by Dr. Georgia Hale, March 1, 2019-Catalog Year 2019-2020. This document is not official until signed and dated by both the student and an authorized university representative.

Student Signature ___________________________________________ Date ____________________

Advisor Signature ___________________________________________ Date ____________________
**UAFS General Education Core Requirements** (Your degree plan may have specific requirements that are listed above.)

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirements</th>
</tr>
</thead>
</table>
| **English Composition** – one of the following sequences required | ENGL 1203 Composition I  
ENGL 1213 Composition II  
OR  
ENGL 1233 Honors Composition  
RHET 2863 Advanced Composition |
| **Mathematics** – one course required | MATH 1303 College Mathematics and Quantitative Literacy  
MATH 1403 College Algebra  
MATH with MATH 1403 as a prerequisite |
| **Fine Arts** – one course required | AHIS 2863 Survey of Art History I  
AHIS 2873 Survey of Art History II  
HUMN 2563 Humanities Through the Arts  
HUMN 2663 Intro to Film  
MUSI 2763 Music Appreciation |
| **History/Government** – one course required | HIST 2753 US History I  
HIST 2763 US History II  
POLS 2753 American National Government |
| **Humanities** – one course required | ENGL 2013 Intro to Global Literature  
ENGL 2023 Intro to American Literature  
PHIL 2753 Intro to Philosophy  
RELI 2303 World Religions |
| **Social Sciences** – two courses, from different areas | ANTH 2803 Cultural Anthropology  
ECON 2803 Principles of Macroeconomics or  
ECON 2813 Principles of Microeconomics  
GEOG 2753 World Regional Geography or  
GEOG 2773 Human Geography  
HIST 1123 Civilizations of the World to 1500 or  
HIST 1133 Civilizations of the World since 1500  
HIST 2753 US History I* or  
HIST 2763 US History II*  
POLS 2753 American National Government*  
PSYC 1163 General Psychology  
SOCI 2753 Introduction to Sociology |

*If not used to meet History/ Government requirement (a course may only be used once)*

| Lab Science – two lecture/lab combinations required | BIOL 1153/1151 Biological Science/Lab  
BIOL 2203/2201 Human Anatomy/Lab  
BIOL 2213/2211 Human Physiology/Lab  
BIOL 2303/2301 General Botany/Lab  
BIOL 2503/2501 General Microbiology/Lab  
BIOL 2703/2701 General Zoology/Lab  
CHEM 1303/1301 Chemical Principles/Lab  
CHEM 1403/1401 College Chemistry I/Lab  
CHEM 1413/1411 College Chemistry II/Lab  
GEOL 1253/1251 Physical Geology/Lab  
PHSC 2503/2501 Fundamentals of Astronomy/Lab |

| Lab Science – two lecture/lab combinations required | PHIL 2863/2861 Physical Science/Lab  
PHYS 2803/2811 College Physics I/Lab  
PHYS 2823/2831 College Physics II/Lab  
PHYS 2903/2911 University Physics I/Lab  
PHYS 2923/2931 University Physics II/Lab |