COMPUTER & INFORMATION TECHNOLOGY DEPARTMENT
Udvar-Hazy Business Building
(435) 652-7723

Department Chair
Curtis Larsen
Office: 323 Udvar-Hazy Bldg.
larsen@dixie.edu
(435) 652-7972

Department Secretary
Lanora Nielson
Office: 300 Udvar-Hazy Bldg.
nielsonL@dixie.edu
($35) 652-7723

Faculty

Professor
Dr. Eric Pederson
(Visual Technology)
Office: 328 Udvar-Hazy Bldg.
pederson@dixie.edu
(435) 652-7977

Professor
Dr. Barton Stander
Office: 325 Udvar-Hazy Bldg.
stander@dixie.edu
(435) 652-7973

Associate Professor
Shane Prine
(Visual Technology)
Office: 330 Udvar-Hazy
prine@dixie.edu
(435) 652-7979

Associate Professor
Ron Woodland
(Visual Technology)
Office: 324 Udvar-Hazy Bldg.
woodland@dixie.edu
(435) 652-7970

Assistant Professor
Dr. Joe Francom
Office: 332 Udvar-Hazy Bldg.
francom@dixie.edu
(435) 652 – 7732

Assistant Professor
Curtis Larsen
Office: 323 Udvar-Hazy Bldg.
larsen@dixie.edu
(435) 652-7972

Assistant Professor
Dr. Russ Ross
Office: 334 Udvar-Hazy Bldg.
ross@dixie.edu
(435) 652-7971
Instructor
Dr. Bob Nielson
Office: 326 Udvar-Hazy Bldg.
nielson@dixie.edu
(435) 652-7978

Lecturer-Advisor
Trent Staheli
Office: 327 Udvar-Hazy Bldg.
tstaheli@dixie.edu
(435) 652-7886

School of Science & Technology
Dean: Dr. Victor Hasfurther
Office: 208 Taylor Bldg.
hasfurther@dixie.edu
(435) 879-4801

Program Description
The Computer & Information Technology (CIT) programs at DSC have the latest equipment, the best software, and a strong faculty who can teach you to use it well. The CIT programs prepare students for careers in graphic design, illustration, web development, multimedia, digital video, systems administration, security and networking, software engineering, and computer programming.

The department offers students a general Computer & Information Technology degree as well as the option to focus on any of three areas: Computer Science, Information Technology, or Visual Technologies. CIT also coordinates with the Udvar-Hazy School of Business in offering a Bachelor of Science in Business with an emphasis in Visual Technologies.

The fields of Computer & Information Technology are diverse, exciting, rapidly changing, and ever expanding. Our programs offer you the opportunity to be challenged in small, personalized classes where you can develop your knowledge and skills to be successful.

Scholarships
The CIT Department has several scholarships available for advanced students in the Computer & information technology program. In addition, The National Science Foundation (NSF) Scholarship is designated for individuals majoring in the fields of Computer Science, Computer Information Technology, Pre-Engineering and Biology. These scholarships pay full tuition, fees and a small book stipend. Entering freshman are eligible up to four years. Sophomore, junior, and senior students may be eligible for one to three years (depending on length of major program). Contact Dr. Victor Hasfurther for further information.

Clubs
Dixie State College's Association of Computing Machinery Club, also known as the Computer Club, provides computer enthusiasts a place to meet, form friendships, share ideas and play computer games. The club meets every week, alternating between learning workshops (where refreshments are provided) and fun game nights.

Each fall semester we participate in the A.C.M.'s international programming contest. During the spring semester our club sponsors a local programming contest for Dixie State College students and students from the local high schools. For more information, contact Dr. Russ Ross, the club’s faculty advisor.

Degrees & Certificates
- Bachelor of Science in Computer & Information Technology
- Bachelor of Science in Computer & Information Technology – Computer Science Emphasis
- Bachelor of Science in Computer & Information Technology – Information Technology Emphasis
- Bachelor of Science in Computer & Information Technology – Visual Technologies Emphasis
- Visual Technologies Certificate
Bachelor of Science in Computer & Information Technology  120 credits

The Bachelor of Science in Computer & Information Technology has four basic components:

1. Lower-division, General Education Requirements, excluding Math, which is included in the Core Discipline Requirements (28 – 32 credits).
2. Core Discipline Requirements (52 – 54 credits).
3. Discipline Elective Requirements (21 credits).
4. Other Electives (up to 19 credits).

General Education
All DSC General Education requirements must be fulfilled. A previously earned degree may fulfill those requirements. However, courses must be equivalent to DSC’s minimum General Education standards in the following subjects:

- American Institutions
- English
- Mathematics

DSC General Education Requirements:
Complete the following:

- ENGL 1010 Intro to Writing 3.0
- ENGL 2010 Intermediate Writing 3.0
- CIS 1200 Computer Skills 3.0
- LIB 1010 Information Literacy 1.0

Complete the following:

- American Institutions GE approved course 3.0
- Life Sciences GE approved course 3.0-5.0
- Physical Science GE approved course 3.0-5.0
- Social & Behavioral Sciences GE approved course 3.0
- Fine Arts / Communication GE approved course 3.0
- Literature / Humanities GE approved course 3.0

Core Discipline Requirements
Complete the following:

- CS 1400 Fundamentals of Programming 3.0
- CS 1410 Object-Oriented Programming 3.0
- CS 2420 Intro to Algorithms and Data Structures 3.0
- CS 2450 Software Engineering 3.0
- CS 3005 Programming in C++ 1.0
- CS 3500 Application Development 3.0
- IT 1100 Introduction to Operating Systems 3.0
- IT 2400 Introduction to Networking 3.0
- IT 3100 Systems Design and Administration I 3.0
- IT 3500 Electronic Commerce 3.0
- VT 1300 Communication Design 3.0
- VT 1400 Intro. to Internet Development 3.0
- VT 2500 Computer Illustration 3.0
- VT 2600 Creative Imaging 3.0
- VT 3000 Internet Publishing and Design 3.0
- VT 3100 Interactive Multimedia 3.0
- ENGL 3010 Writing in the Professions 3.0

Complete one of the following: 3.0-5.0

- MATH 1100 Business Calculus (3.0)
- MATH 1210 Calculus I (5.0)
Complete one of the following: 3.0

- CS 4600 Senior Project (3.0)
- IT 4600 Senior Project (3.0)
- VT 4600 Senior Project (3.0)

**Discipline Elective Requirements** 21.0

Complete 21 credits from the following:

- CS 2810 Computer Organization and Architecture (3.0)
- CS 3400 Operating Systems (3.0)
- CS 3410 Distributed Systems (3.0)
- CS 3600 Graphics Programming (3.0)
- CS 4000 Dynamic Web Development (3.0)
- CS 4010 Interactive Web Development (3.0)
- CS 4100 Advanced Multimedia/Internet Integration (3.0)
- CS 4300 Artificial Intelligence (3.0)
- CS 4550 Compilers (3.0)
- IT 3110 Systems Design and Administration II (3.0)
- IT 3200 Perl Programming (3.0)
- IT 3550 Internet/E-Commerce Marketing (3.0)
- IT 4200 Advanced Web Delivery (3.0)
- IT 4300 Database Design and Management (3.0)
- IT 4400 Network Design and Management (3.0)
- IT 4500 Information Security (3.0)
- MKTG 3010 Marketing Principles (3.0)
- VT 2700 Typography (3.0)
- VT 2710 Advanced Typography (3.0)
- VT 3200 Portfolio Preparation (3.0)
- VT 3300 Introduction to Digital Video Editing (3.0)
- VT 3600 3-D Visualization (3.0)
- VT 3750 Graphic Design History (3.0)
- VT 3780 Prepress & Print Production (3.0)
- VT 3800 Corporate Identity (3.0)
- VT 4000 Dynamic Web Development (3.0)
- VT 4010 Interactive Web Development (3.0)
- VT 4100 Advanced Multimedia/Internet Integration (3.0)
- VT 4700 Publication Design (3.0)
- VT 4750 Package Design (3.0)

**NOTE:** Cross-listed courses may only be used once to fill elective requirements. Cross-listed courses are CS/VT 4000, CS/VT 4010, CS/VT 4100.

**Graduation Requirements**

1. Complete a minimum of 120 college-level credits (1000 and above).
2. Complete at least 40 upper-division credits.
3. Complete at least 30 upper-division credits at DSC for institutional residency.
4. Cumulative GPA 2.0 or higher.
5. Grade C- or higher in each Core Discipline and Elective Requirement course.

**Bachelor of Science in Computer & Information Technology**

**Computer Science Emphasis**

120 credits

The Bachelor of Science in Computer & Information Technology with an emphasis in Computer Science has four basic components:

1. Lower-division, General Education Requirements, excluding Math, which is included in the Core Discipline Requirements (28 – 32 credits).
2. Core Discipline Requirements (63 credits).
3. Discipline Elective Requirements (9 credits).
4. Other Electives (up to 20 credits).
General Education
All DSC General Education requirements must be fulfilled. A previously earned degree may fulfill those requirements. However, courses must be equivalent to DSC’s minimum General Education standards in the following subjects:

- American Institutions
- English
- Mathematics

DSC General Education Requirements
Complete the following:

- ENGL 1010 Intro to Writing 3.0
- ENGL 2010 Intermediate Writing 3.0
- CIS 1200 Computer Skills 3.0
- LIB 1010 Information Literacy 1.0

Complete the following:

- American Institutions GE approved course 3.0
- Life Sciences GE approved course 3.0-5.0
- Physical Science GE approved course 3.0-5.0
- Social & Behavioral Sciences GE approved course 3.0
- Fine Arts / Communication GE approved course 3.0
- Literature / Humanities GE approved course 3.0

Core Discipline Requirements
Complete the following:

- CS 1400 Fundamentals of Programming 3.0
- CS 1410 Object-Oriented Programming 3.0
- CS 2420 Intro to Algorithms & Data Structures 3.0
- CS 2450 Software Engineering 3.0
- CS 2810 Computer Organization & Architecture 3.0
- CS 3005 Programming in C++ 1.0
- CS 3310 Discrete Math 3.0
- CS 3510 Advanced Algorithms/Data Structures 3.0
- CS 3520 Programming Language 3.0
- CS 3530 Computational Theory 3.0
- CS 3600 Graphics Programming 3.0
- CS 4300 Artificial Intelligence 3.0
- CS 4550 Compilers 3.0
- CS 4600 Senior Project 3.0
- IT 1100 Introduction to Operating Systems 3.0
- IT 2400 Introduction to Networking 3.0
- IT 4300 Database Design and Management 3.0
- MATH 1210 Calculus I 5.0
- VT 1400 Intro. to Internet Development 3.0
- ENGL 3010 Writing in the Professions 3.0

Complete one of the following: 3.0

- CS 3400 Operating Systems (3.0)
- CS 3410 Distributed Systems (3.0)

Discipline Elective Requirements 9.0
Complete 9 credits from the following (courses used to complete Core Discipline Requirements may not be repeated here):

- CS 3310 Discrete Math (3.0)
- CS 3400 Operating Systems (3.0)
- CS 3410 Distributed Systems (3.0)
- CS 3500 Application Development (3.0)
Graduation Requirements

1. Complete a minimum of 120 college-level credits (1000 and above).
2. Complete at least 40 upper-division credits.
3. Complete at least 30 upper-division credits at DSC for institutional residency.
4. Cumulative GPA 2.0 or higher.
5. Grade C- of higher in each Core Discipline and Elective Requirement course.

Bachelor of Science in Computer & Information Technology 120 credits

Information Technology Emphasis

The Bachelor of Science in Computer & Information Technology with an emphasis in Information Technology has four basic components:

1. Lower-division, General Education Requirements, excluding Math, which is included in the Core Discipline Requirements (28 – 32 credits).
2. Core Discipline Requirements (57 – 59 credits).
3. Discipline Elective Requirements (15 credits).
4. Other Electives (up to 20 credits).

General Education

All DSC General Education requirements must be fulfilled. A previously earned degree may fulfill those requirements. However, courses must be equivalent to DSC’s minimum General Education standards in the following subjects:

- American Institutions
- English
- Mathematics

DSC General Education Requirements

Complete the following:

- ENGL 1010 Intro to Writing 3.0
- ENGL 2010 Intermediate Writing 3.0
- CIS 1200 Computer Skills 3.0
- LIB 1010 Information Literacy 1.0

Complete the following:

- American Institutions GE approved course 3.0
- Life Sciences GE approved course 3.0-5.0
- Physical Science GE approved course 3.0-5.0
- Social & Behavioral Sciences GE approved course 3.0
- Fine Arts / Communication GE approved course 3.0
- Literature / Humanities GE approved course 3.0

Core Discipline Requirements

Complete the following:
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 1400</td>
<td>Fundamentals of Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 1410</td>
<td>Object Oriented Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 2420</td>
<td>Intro to Algorithms and Data Structures</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 1100</td>
<td>Introduction to Operating Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 2400</td>
<td>Introduction to Networking</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 3100</td>
<td>Systems Design and Administration I</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 3110</td>
<td>Systems Design and Administration II</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 3500</td>
<td>Electronic Commerce</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 4200</td>
<td>Advanced Web Delivery</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 4300</td>
<td>Database Design and Management</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 4400</td>
<td>Network Design and Management</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 4500</td>
<td>Information Security</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 4600</td>
<td>Senior Project</td>
<td>3.0</td>
</tr>
<tr>
<td>VT 1300</td>
<td>Communication Design</td>
<td>3.0</td>
</tr>
<tr>
<td>VT 1400</td>
<td>Introduction to Internet Development</td>
<td>3.0</td>
</tr>
<tr>
<td>VT 2500</td>
<td>Computer Illustration</td>
<td>3.0</td>
</tr>
<tr>
<td>VT 2600</td>
<td>Creative Imaging</td>
<td>3.0</td>
</tr>
<tr>
<td>ENGL 3010</td>
<td>Writing in the Professions</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Complete one of the following: 3.0-5.0

- MATH 1100 Business Calculus (3.0)
- MATH 1210 Calculus I (5.0)

**Discipline Elective Requirements**

Complete 15 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 2450</td>
<td>Software Engineering</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 2810</td>
<td>Computer Organization and Architecture</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 3000</td>
<td>Internet Publishing and Design</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 3005</td>
<td>Programming in C++</td>
<td>1.0</td>
</tr>
<tr>
<td>CS 3100</td>
<td>Interactive Multimedia</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 3400</td>
<td>Operating Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 3410</td>
<td>Distributed Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 3500</td>
<td>Application Development</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 3600</td>
<td>Graphics Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 4000</td>
<td>Dynamic Web Development</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 4010</td>
<td>Interactive Web Development</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 4100</td>
<td>Advanced Multimedia/Internet Integration</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 4300</td>
<td>Artificial Intelligence</td>
<td>3.0</td>
</tr>
<tr>
<td>CS 4550</td>
<td>Compilers</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 3200</td>
<td>Perl Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>IT 3550</td>
<td>Internet and E-commerce Marketing</td>
<td>3.0</td>
</tr>
<tr>
<td>MKTG 3010</td>
<td>Marketing Principles</td>
<td>3.0</td>
</tr>
<tr>
<td>VT 3000</td>
<td>Internet Publishing and Design</td>
<td>3.0</td>
</tr>
<tr>
<td>VT 3100</td>
<td>Interactive Multimedia</td>
<td>3.0</td>
</tr>
<tr>
<td>VT 3200</td>
<td>Portfolio Preparation</td>
<td>3.0</td>
</tr>
<tr>
<td>VT 3800</td>
<td>Corporate Identity</td>
<td>3.0</td>
</tr>
<tr>
<td>VT 4000</td>
<td>Dynamic Web Development</td>
<td>3.0</td>
</tr>
<tr>
<td>VT 4010</td>
<td>Interactive Web Development</td>
<td>3.0</td>
</tr>
<tr>
<td>VT 4100</td>
<td>Advanced Multimedia/Internet Integration</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**NOTE:** Cross-listed courses may only be used once to fill elective requirements. Cross listed courses are: CS/VT 3000, CS/VT 3100, CS/VT 4000, CS/VT 4010, CS/VT 4100.

**Graduation Requirements**

1. Complete a minimum of 120 college-level credits (1000 and above).
2. Complete at least 40 upper-division credits.
3. Complete at least 30 upper-division credits at DSC for institutional residency.
4. Cumulative GPA 2.0 or higher.
5. Grade C- of higher in each Core Discipline and Elective Requirement course.
Bachelor of Science in Computer & Information Technology  120 credits

Visual Technologies Emphasis

The Bachelor of Science in Computer & Information Technology with an emphasis in Visual Technologies has four basic components:

1. Lower-division, General Education Requirements, excluding Math, which is included in the Core Discipline Requirements (28 – 32 credits).
2. Core Discipline Requirements (54 credits).
3. Discipline Elective Requirements (21 credits)
4. Other Electives (up to 17 credits).

General Education

All DSC General Education requirements must be fulfilled. A previously earned degree may fulfill those requirements. However, courses must be equivalent to DSC’s minimum General Education standards in the following subjects:

- American Institutions
- English
- Mathematics

DSC General Education Requirements

Complete the following:

- ENGL 1010 Intro to Writing  3.0
- ENGL 2010 Intermediate Writing  3.0
- CIS 1200 Computer Skills  3.0
- LIB 1010 Information Literacy  1.0

Complete the following:

- American Institutions GE approved course  3.0
- Life Sciences GE approved course  3.0-5.0
- Physical Science GE approved course  3.0-5.0
- Social & Behavioral Sciences GE approved course  3.0
- Fine Arts / Communication GE approved course  3.0
- Literature / Humanities GE approved course  3.0

Core Discipline Requirements

Complete the following:

- CS 1400 Fundamentals of Programming  3.0
- CS 1410 Object Oriented Programming  3.0
- IT 1100 Introduction to Operating Systems  3.0
- IT 2400 Introduction to Networking  3.0
- IT 3500 Electronic Commerce  3.0
- ENGL 3010 Writing in the Professions  3.0
- MATH 1100 Business Calculus  3.0
- VT 1300 Communication Design  3.0
- VT 1400 Intro. to Internet Development  3.0
- VT 2500 Computer Illustration  3.0
- VT 2600 Creative Imaging  3.0
- VT 3000 Internet Publishing and Design  3.0
- VT 3100 Interactive Multimedia  3.0
- VT 3200 Portfolio Preparation  3.0
- VT 3300 Intro. to Digital Video Editing  3.0
- VT 3600 3-D Visualization  3.0
- VT 4000 Dynamic Web Development  3.0
- VT 4600 Senior Project  3.0
Discipline Electives Requirements

Complete **21 credits** from the following:

- ART 1110  Basic Drawing and Composition (3.0)
- ART 2060  Digital Photography (3.0)
- ART 3060  Digital Commercial Studio Photo (3.0)
- CS 2420  Intro to Algorithms and Data Structures (3.0)
- CS 2450  Software Engineering (3.0)
- CS 3500  Application Development (3.0)
- IT 3100  Systems Design and Administration I (3.0)
- IT 3110  Systems Design and Administration II (3.0)
- IT 3550  Internet and E-Commerce Marketing (3.0)
- IT 4200  Advanced Web Delivery (3.0)
- IT 4300  Database Design and Management (3.0)
- IT 4400  Network Design and Management (3.0)
- IT 4500  Information Security (3.0)
- MKTG 3010  Marketing Principles (3.0)
- VT 2700  Typography (3.0)
- VT 3650  3-D Animation (3.0)
- VT 3710  Advanced Typography (3.0)
- VT 3750  Graphic Design History (3.0)
- VT 3780  Prepress & Print Production (3.0)
- VT 3800  Corporate Identity (3.0)
- VT 4010  Interactive Web Development (3.0)
- VT 4100  Adv Multimedia/Internet Integration (3.0)
- VT 4700  Publication Design (3.0)
- VT 4750  Package Design (3.0)
- VT 4900  Independent Research (1.0 – 3.0)
- VT 4910  Senior Graphic Design Exhibit (3.0)
- VT 4920  Visual Technology Internship (1.0 – 3.0)
- VT 4990  Seminars in Visual Technologies (1.0 – 3.0)

Graduation Requirements

1. Complete a minimum of 120 college-level credits (1000 and above).
2. Complete at least 40 upper-division credits.
3. Complete at least 30 upper-division credits at DSC for institutional residency.
4. Cumulative GPA 2.0 or higher.
5. Grade C- of higher in each Core Discipline and Elective Requirement course.

Visual Technologies Certificate 28-29 credits

General Education Requirements

Complete the following:

- ENGL 1010  Intro to Writing  3.0
- LIB 1010  Information Literacy  1.0

Complete one of the following:  3.0-4.0

- MATH 1010  Intermediate Algebra (4.0)
- MATH 1050  College Algebra/Pre-Calculus (4.0)
- MATH 1100  Business Calculus (3.0)

Core Discipline Requirements

Complete all of the following:

- CS 1400  Fundamentals of Programming  3.0
- VT 1300  Communication Design  3.0
- VT 1400  Intro to Internet Development  3.0
- VT 2500  Computer Illustration  3.0
Completion Requirements

1. Complete a minimum of 28 college-level credits (1000 and above).
2. Complete at least 20 credits at DSC for institutional residency.
3. Cumulative GPA 2.0 or higher.
4. Minimum Grade C- or higher required on each Core Discipline course.

- VT 2600  Creative Imaging 3.0
- VT 3000  Internet Publishing and Design 3.0
- VT 3100  Interactive Materials 3.0