

# INFORMATION TECHNOLOGY, INTERDISCIPLINARY

Degree: Bachelor of Science  
Specializations: Bioinformation, Computer Technology,  
Digital Enterprise, Digital Media, e-  
Learning Support Systems, Human  
Computer Interaction  
Coordinator: M. Lockhart  
Building 79, Room 102  
(850) 474-2542  
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Semester Hours Required for Degree: 120

The Interdisciplinary Information Technology (IIT) degree is a cooperative effort among all three colleges at UWF. Students complete a set of prerequisites, a common core, and courses from one of six IIT specializations: Bioinformation, Computer Technology, Digital Enterprise, Digital Media, e-Learning, or Human-Computer Interaction. Each track includes a Minor or a Certificate and a senior capstone experience.

## PROGRAM REQUIREMENTS

In addition to general University requirements, students seeking the B.S. in Interdisciplinary Information Technology must meet the requirements listed below.

Students should consult with their academic advisor for courses which may satisfy both the General Studies requirements and common prerequisites.

Course descriptions are listed alphabetically by prefix in the back of this *Catalog*.

## BIOINFORMATION SPECIALIZATION

The Bioinformation Specialization is a collaborative effort between the Departments of Biology and Computer Science. The purpose of this specialization is to provide students with sufficient training in both fields to allow them to enter the rapidly growing market for personnel capable of storing, extracting, organizing, analyzing, interpreting, and utilizing the increasing mass of biological data. The skills provided to students within this specialization will address the major challenge of utilizing the immense storehouse of biological and medical data to solve problems and develop new products for the biomedical, pharmaceutical, and biotechnology industries. For further information about this specialization, contact the Department of Biology at (850) 474-2885 or [biology@uwf.edu](mailto:biology@uwf.edu).

### General Studies (36 sh)

For additional information see the General Studies section of this *Catalog*.

### Common Prerequisites (40 sh)

State mandated common prerequisites must be completed prior to graduation, but are not required for admission to the program. Courses in brackets indicate substitutes from Florida public community/junior colleges and universities.

#### Core Program Common Prerequisites (24 sh)

CGS 2570	Personal Computer Applications .....3
	[CGS xxxx-database concepts]
COP 2253	Programming Using Java .....3
	[COP 2xxx-computer programming]
COP 2334	Programming Using C++ .....3
	[COP 2xxx-object oriented computer programming]
+ ECO 2013	Principles of Economics Macro .....3
+ MAC 1140	Precalculus Algebra .....3
	[MAC 1140 or MAD 2104]
+ PHI 2603	Ethics in Contemporary Society .....3
	[PHI xxxx-ethics]
+ PSY 2012	General Psychology .....3
	[PSY xxxx]
+ STA 2023	Elements of Statistics .....3

#### Additional Bioinformation

#### Common Prerequisites (16 sh)

+ CHM 2045/L	General Chemistry I/Lab .....4
+ CHM 2046/L	General Chemistry II/Lab .....4
+ PCB 2131/L	Cell Biology/Lab .....4

Choose one:

+ BOT 2010/L	General Botany/Lab .....4
+ ZOO 1010/L	General Zoology/Lab .....4

+ Indicates common prerequisites which can be used to satisfy General Studies requirements.

### Lower Division Electives (0-6 sh)

Sufficient 1000/2000 level electives to complete at least 60 semester hours in the lower division. Current UWF students may use elective courses at any level (1000-4999) to meet this elective requirement.

### Major (51 sh)

#### Interdisciplinary Information Technology

#### Common Core (15 sh)

CGS 3283	Networking Principles .....3
CGS 3604	Applications of Information Technology .....3
COP 4710	Database Systems .....3
GEB 3032	Business Foundations for Non-Business Majors .....3

Choose One Writing Course:

ENC 3240	Technical Writing ..... 3
ENC 3250	Professional Writing ..... 3
GEB 3212	Writing For Business: Theory and Practice .....3

#### Bioinformation Specialization Courses (36 sh)

BSC 4434	Introduction to Bioinformatics .....3
CAP 4401	Introduction to Digital Image Processing .....3
CDA 3100	Microprocessor Systems .....3
CIS 3020	Introduction to CIS .....3
COT 3100	Applications of Discrete Structures .....3
MCB 3020/L	Microbiology/Lab .....4

PCB 3063/L	Genetics/Lab .....	4
PCB 4043/L	Ecology/Lab .....	4
PCB 4970	Interdisciplinary Senior Research Project .....	3
STA 4173	Biostatistics .....	3
	3000/4000 level advisor-approved elective .....	3

**Major-Related (4 sh)**

MAC 2311	Analytic Geometry and Calculus I .....	4
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**Upper Division Electives (5 sh)**

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or completion of all departmental requirements at the 3000/4000 level, whichever is greater.

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## COMPUTER TECHNOLOGY SPECIALIZATION

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The Computer Technology Specialization provides a firm foundation of basic course work in programming principles, database concepts, and general topics in computer science. Graduates of this program will have a strong foundation in computer skills required for most entry-level positions in database administration, software development, and systems analysis. For further information about this specialization, contact the Department of Computer Science at (850) 474-2542 or [iit@uwf.edu](mailto:iit@uwf.edu).

**General Studies (36 sh)**

For additional information see the General Studies section of this *Catalog*.

**Common Prerequisites (24 sh)**

State mandated common prerequisites must be completed prior to graduation, but are not required for admission to the program. Courses in brackets indicate substitutes from Florida public community/junior colleges and universities.

CGS 2570	Personal Computer Applications .....	3
	[CGS xxxx-data base concepts]	
COP 2253	Programming Using Java .....	3
	[COP 2xxx-computer programming]	
COP 2334	Programming Using C++ .....	3
	[COP 2xxx-object oriented computer programming]	
+ ECO 2013	Principles of Economics Macro .....	3
+ MAC 1140	Precalculus Algebra .....	3
	[MAC 1140 or MAD 2104]	
+ PHI 2603	Ethics in Contemporary Society .....	3
	[PHI xxxx-ethics]	
+ PSY 2012	General Psychology .....	3
	[PSY xxxx]	
+ STA 2023	Elements of Statistics .....	3

+ Indicates common prerequisites which can be used to satisfy General Studies requirements.

**Lower Division Electives (0-15 sh)**

Sufficient 1000/2000 level electives to complete at least 60 semester hours in the lower division. Current UWF students may use elective courses at any level (1000-4999) to meet this elective requirement.

**Major (45 sh)**

## Interdisciplinary Information Technology

## Common Core (15 sh)

Same as Bioinformation Technology

## Computer Technology

## Specialization Courses (18 sh)

CDA 3100	Microprocessor Systems .....	3
CIS 3021	Science of Computing .....	3
CIS 4940	IIT Senior Project .....	3
COP 3022	Intermediate Computer Programming .....	3
COP 3530	Data Structures & Algorithms .....	3
COT 3100	Applications of Discrete Structures .....	3

## Computer Technology Elective Courses

## (Choose 12 sh)

ART 2600C	Computer Imaging I .....	3
ART 3610C	Computer Imaging II: Image Manipulation .....	3
ART 4618C	Digital Multimedia I .....	3
CAP 4730	Computational Structures in Computer Graphics .....	3
CEN 3031	Introduction to Software Engineering .....	3
CEN 4400	Introduction to Operations Research .....	3
CEN 4540	Computer and Network Security .....	3
CGS 3172	Web Design for e-Commerce .....	3
CGS 3823	Web Page Design .....	3
CIS 4340	Software Methods for Remote Databases .....	3
COP 3813	Internet Programming .....	3
COP 3835	Web Based Programming .....	3
COP 4173	Advanced Visual Basic Programming .....	3
COP 4331	Object Oriented Programming .....	3
COP 4600	Operating Systems .....	3
EME 3402	Information Engineering Technology: An Overview .....	3
	Course offered 1-3 sh per semester	

Other 3000/4000 level courses may be approved by advisor.

**Major-Related (3-7 sh)**

MAD 3107	Discrete Mathematics and Applications .....	3
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*Choose either of the following if not taken*

*at the lower division:*

MAC 2233	Calculus with Business Applications .....	3
MAC 2311	Analytic Geometry and Calculus I .....	4

**Upper Division Electives (8-12 sh)**

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or completion of all departmental requirements at the 3000/4000 level, whichever is greater.

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## DIGITAL ENTERPRISE SPECIALIZATION

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The Digital Enterprise specialization provides applied study of Internet programming concepts, networking principles, website graphics and design development, and digital commerce technology. This curriculum features practical, hands-on experience with cutting-edge Internet computer applications. Successful graduates of the program will be prepared for high tech positions such as Internet

programmer, webmaster, and Internet commerce technology analyst. Capstone experience is the Digital Enterprise Senior Project. Degree includes a minor in e-Business and Computer Information Systems. For further information concerning this specialization, contact the Department of Computer Science at (850) 474-2542 or [iit@uwf.edu](mailto:iit@uwf.edu).

No more than 30 semester hours of College of Business prefix courses may be applied to this degree.

### **General Studies (36 sh)**

For additional information see the General Studies section of this *Catalog*.

### **Common Prerequisites (24 sh)**

Same as Computer Technology Specialization

### **Lower Division Electives (0-15 sh)**

Sufficient 1000/2000 level electives to complete at least 60 semester hours in the lower division. Current UWF students may use elective courses at any level (1000-4999) to meet this elective requirement.

### **Major (48 sh)**

Interdisciplinary Information Technology

Common Core (15 sh)

Same as Bioinformation Specialization

#### Digital Enterprise Specialization Courses (27 sh)

CIS 3021	Science of Computing .....	3
CIS 4340	Software Methods for Remote Databases .....	3
GEB 4935	Digital Enterprise Senior Capstone .....	3
ISM 3011	e-Business Systems Fundamentals .....	3
MAN 3025	Management Fundamentals .....	3
MAR 3023	Marketing Fundamentals .....	3
MAR 4721	Internet Marketing Principles .....	3
MAR 4728	High Tech Marketing Strategy .....	3
MAR 4880	Internet Marketing Management .....	3

#### Digital Enterprise Electives (Choose 6 sh)

ART 2600C	Computer Imaging I .....	3
ART 3613C	Computer Imaging II: Image Manipulation .....	3
CGS 3172	Web Design for e-Commerce .....	3
CGS 3523	Computer Graphics Applications .....	3
CGS 3823	Web Page Design .....	3
CGS 3875	Multimedia Systems .....	3
COP 3813	Internet Programming .....	3
COP 3835	Web Based Programming .....	3
EME 3402	Information Engineering Technology: An Overview .....	3
	Course offered 1-3 sh per semester	

### **Major-Related (0 sh)**

### **Upper Division Electives (12 sh)**

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or completion of all departmental requirements at the 3000/4000 level, whichever is greater. If GEB 3212 is included in the program, no courses from the College of Business may be taken as electives.

## **DIGITAL MEDIA SPECIALIZATION**

The Digital Media Specialization presents students with a program of study that emphasizes the creativity of studio arts practices in exploring, shaping, and influencing information technology. A blend of creative problem solving, studio practice, business, and technology creates a program for today and the future. This program extends the activities of the visual arts digital media program at UWF, a state of the art facility dedicated to creative problem solving, artistic communication, and development in design, interarts, computer/digital imaging, web design, digital media installation, and performance. Students will take a series of courses designed to give them hands-on experience with a full range of arts theory and practice. Study in the IIT Digital Media Specialization will provide students with both the theoretical foundation and practical experience needed for careers in fields related to IIT digital media. For further information about this specialization, contact the Department of Art at (850) 474-2045 or [visualarts@uwf.edu](mailto:visualarts@uwf.edu).

### **General Studies (36 sh)**

For additional information see the General Studies section of this *Catalog*.

### **Common Prerequisites (42 sh)**

State mandated common prerequisites must be completed prior to graduation, but are not required for admission to the program. Courses in brackets indicate substitutes from Florida public community/junior colleges and universities.

#### Core Program Common Prerequisites (24 sh)

CGS 2570	Personal Computer Applications .....	3
	[CGS xxxx-data base concepts]	
COP 2253	Programming Using Java .....	3
	[COP 2xxx-computer programming]	
COP 2334	Programming Using C++ .....	3
	[COP 2xxx-object oriented computer programming]	
+ ECO 2013	Principles of Economics Macro .....	3
+ MAC 1140	Precalculus Algebra .....	3
	[MAC 1140 or MAD 2140]	
+ PHI 2603	Ethics in Contemporary Society .....	3
	[PHI xxxx-ethics]	
+ PSY 2012	General Psychology .....	3
	[PSY xxxx]	
+ STA 2023	Elements of Statistics .....	3

#### Additional Digital Media

#### Common Prerequisites (18 sh)

+ ARH 2051	Western Survey II: Baroque to Contemporary .....	3
ART 1300C	Drawing I - Fundamentals .....	3
ART 2201C	Two Dimensional Design .....	3
ART 2600C	Computer Imaging I .....	3
MMC 2000	Principles of Mass Communication .....	3
SPC 2016	Basic Communication Skills .....	3

+ Indicates common prerequisites which can be used to satisfy General Studies requirements.

### **Lower Division Electives (0 sh)**

**Major (30 sh)**

Interdisciplinary Information Technology  
Common Core (15 sh)  
Same as Bioinformation Specialization

**Digital Media Specialization Courses (15 sh)**

ART 3613C	Computer Imaging II: Image Manipulation.....3
ART 4618C	Digital Multimedia I.....3
ART 4619C	Digital Multimedia II .....3
ART 4630C	Artists Video .....3
ART 4632	Digital Media Project .....3

**Major-Related (15 sh)**

Students in the Digital Media track will select a secondary area of specialization in one of four Communication Arts programs: telecommunications and film, advertising, public relations, or journalism. Courses used in fulfillment of this secondary area must have the prior approval of the advisor.

**Upper Division Electives (15 sh)**

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or completion of all departmental requirements at the 3000/4000 level, whichever is greater.

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## E-LEARNING SUPPORT SYSTEMS SPECIALIZATION

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The e-Learning Systems Support Specialization is an intensive professional development program for higher order skills in the design, implementation, and maintenance of network and telecommunications systems for training and education organizations. It provides an alternative path to the short term, time-sensitive, narrowly focused, application-specific skills training provided by commercial training concerns or community colleges in the form of a lengthier, more generalized, broad-ranging course of study. The program is highly technical without being too narrowly focused, and provides additional emphasis on developing strategies for the application of the technologies in innovative ways. Special attention is also devoted to development of planning and organizational skills required to implement and evolve complex systems as well as maintain them. For further information contact the Division of Engineering and Computer Technology at (850) 474-2300 or at [ect@uwf.edu](mailto:ect@uwf.edu).

**General Studies (36 sh)**

For additional information see the General Studies section of this *Catalog*.

**Common Prerequisites (24 sh)**

Same as Computer Technology Specialization

**Lower Division Electives (0-15 sh)**

Sufficient 1000/2000 level electives to complete at least 60 semester hours in the lower division. Current UWF students may use elective courses at any level (1000-4999) to meet this elective requirement.

**Major (36 sh)**

Interdisciplinary Information Technology  
Common Core (16 sh)

CGS 3604	Applications of Information Technology .....3
COP 4710	Database Systems .....3
EME 4622	Technology Tools: Site-Based Educational Networks .....4
GEB 3032	Business Foundations for Non-Business Majors .....3
<i>Choose One Writing Course:</i>	
ENC 3240	Technical Writing ..... 3
ENC 3250	Professional Writing ..... 3
GEB 3212	Writing For Business: Theory and Practice .....3

**e-Learning Specialization Courses (20 sh)**

EME 3402	Information Engineering Technology: An Overview .....3
Course offered 1-3 sh per semester	
EME 3406	Web Environments for Learning & Information .....4
EME 4313	Multimedia Applications for e-Learning .....3
EME 4454	Distance Educational Technologies .....3
EME 4627	Education and Training Technology Support Systems .....4
EME 4944	Internship/Practica in Technology .....3

**Major-Related (12 sh)**

*Choose one option: (12 sh)*

**Systems and Planning Option**

ISM 3011	e-Business Systems Fundamentals .....3
ISM 4300	Systems Planning, Design & Control .....3
SPC 2016	Basic Communication Skills .....3
SPC 3425	Group & Team Communication .....3

**Digital Media Option**

ART 2600C	Computer Imaging I .....3
ART 3613C	Computer Imaging II: Image Manipulation .....3
ART 4618C	Digital Multimedia I .....3
ART 4619C	Digital Multimedia II .....3

**e-Business Option**

CIS 4340	Software Methods for Remote Databases .....3
GEB 4134	Advanced e-Business: Business to Consumer .....3
GEB 4135	Advanced e-Business: Business to Business .....3
ISM 3011	e-Business Systems Fundamentals .....3

**Upper Division Electives (12 sh)**

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or completion of all departmental requirements at the 3000/4000 level, whichever is greater.

## HUMAN-COMPUTER INTERACTION SPECIALIZATION

The Human-Computer Interaction Specialization provides a foundation in computer applications, programming principles, statistics, database concepts, and behavioral aspects of computer technology. Graduates of this program will have a foundation in computer-related and behavioral skills required for many entry-level positions in computer applications, database applications, systems analysis, computer usability, statistical and other quantitative analyses, computer-related research in behavioral areas, and human-computer interfacing. For further information about this specialization, contact the Department of Computer Science at (850) 474-2542 or [iit@uwf.edu](mailto:iit@uwf.edu).

### **General Studies (36 sh)**

For additional information see the General Studies section of this *Catalog*.

### **Common Prerequisites (24 sh)**

Same as Computer Technology Specialization

### **Lower-Division Electives (0-15 sh)**

Sufficient 1000/2000 level electives to complete at least 60 semester hours in the lower division. Current UWF students may use elective courses at any level (1000-4999) to meet this elective requirement.

### **Major (51 sh)**

Interdisciplinary Information Technology

Common Core (15 sh)

Same as Bioinformation Specialization

#### Human-Computer Interaction Specialization Courses (18 sh)

CEN 4721	Human-Computer Interaction .....	3
CGS 3559	Exploring the Internet .....	3
CIS 3021	Science of Computing .....	3
CIS 4940	IIT Senior Project .....	3
EXP 4250	Human Factors Psychology .....	3

#### *Choose One:*

EXP 4404	Psychology of Learning .....	3
PSB 4002	Brain, Behavior and Experience .....	3

#### Human-Computer Interaction

##### Elective Choose 18 sh:

CEN 4400	Introduction to Operations Research .....	3
CGS 3464	Programming in Visual Basic for Non-Majors .....	3
CGS 3523	Computer Graphics Applications .....	3
CGS 3823	Web Page Design .....	3
CGS 3875	Multimedia Systems .....	3
CIS 4340	Software Methods for Remote Databases.....	3
EXP 3082	Experimental Psychology .....	3
EXP 3082L	Experimental Psychology Lab .....	1
EXP 4204	Sensation and Perception .....	3
EXP 4507	Memory and Cognition .....	3

INP 3004	Industrial Psychology .....	3
SOP 3004	Social Psychology .....	3
3000/4000 level course approved by advisor .....		3

### **Major-Related (0 sh)**

### **Upper-Division Electives (9 sh)**

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or completion of all departmental requirements at the 3000/4000 level, whichever is greater.