

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
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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.

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 [CGS xxxx-data base concepts]	3
COP	2253	Programming Using Java [COP 2xxx-computer programming]	3
COP	2334	Programming Using C++ [COP 2xxx-object oriented computer programming]	3
+ECO	2013	Principles of Economics Macro	3

+MAC	1140	Precalculus Algebra [MAC 1140 or MAD 2104]	3
+PHI	2603	Ethics in Contemporary Society [PHI xxxx-ethics]	3
+PSY	2012	General Psychology [PSY xxxx]	3
+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.

COMPUTER TECHNOLOGY SPECIALIZATION

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

DIGITAL ENTERPRISE SPECIALIZATION

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 csadvisor@cs.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	3610C	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.

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 [CGS xxxx-data base concepts]	3
COP	2253	Programming Using Java [COP 2xxx-computer programming]	3
COP	2334	Programming Using C++ [COP 2xxx-object oriented computer programming]	3
+ECO	2013	Principles of Economics Macro	3
+MAC	1140	Precalculus Algebra [MAC 1140 or MAD 2140]	3
+PHI	2603	Ethics in Contemporary Society [PHI xxxx-ethics]	3
+PSY	2012	General Psychology [PSY xxxx]	3
+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	3610C	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.

E-LEARNING SUPPORT SYSTEMS SPECIALIZATION

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.

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

Choose One Writing Course:

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	3610C	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 csadvisor@cs.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 Courses (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	4003	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	4XXX	Memory and Cognition	3
EXP	4XX2	Sensation and Perception	3
INP	3004	Industrial Psychology	3
SOP	3004	Social Psychology	3
		3000/4000 level course approved by advisor	3

Major-Related Courses (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.