

COMPUTER INFO & TECH COMPUTER APPLICATION DEVELOPMENT

REQUIREMENTS

CORE CURRICULUM The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at marshall.edu/gened.

CORE 1: CRITICAL THINKING

| CODE | COURSE NAME | HRS | GRADE |
|---------|------------------------------|-----|-------|
| FYS 100 | First Year Sem Crit Thinking | 3 | _____ |
| STA 225 | Critical Thinking Course | 3 | _____ |
| _____ | Critical Thinking Course | 3 | _____ |

CORE 2:

| CODE | COURSE NAME | HRS | GRADE |
|------------|---------------------------|-----|-------|
| ENG 101 | Beginning Composition | 3 | _____ |
| ENG 201 | Advanced Composition | 3 | _____ |
| CMM 103 | Fund Speech-Communication | 3 | _____ |
| MTH 140 | Mathematics | 5 | _____ |
| IST 111 or | Core II Physical/Natural | 4 | _____ |
| BSC 104 | Science | 3 | _____ |
| _____ | Core II Humanities | 3 | _____ |
| _____ | Core II Social Science | 3 | _____ |
| _____ | Core II Fine Arts | 3 | _____ |

Additional University Requirements

| | | | |
|-------------|--------------------------------|---|-------|
| _____ | Writing Intensive | 3 | _____ |
| _____ | Writing Intensive | 3 | _____ |
| _____ | Multicultural or International | 3 | _____ |
| CIT 490/470 | Capstone | 3 | _____ |

MAJOR

All Computer Information Technology majors are required to take the following courses:

| CODE | COURSE NAME | HRS | GRADE | CODE | COURSE NAME | HRS | GRADE |
|---------|-----------------------------|-----|-------|------------|-----------------------------------|-----|-------|
| IST 150 | Spreadsheet & Database Prin | 3 | _____ | CIT 365 | Database Management | 3 | _____ |
| IST 264 | Technology Foundations | 3 | _____ | ART 214 | Foundations: Grid/Chroma or | 3 | _____ |
| CIT 163 | Intro to Programming C++ | 3 | _____ | or 219 | Foundations: Frame/Time | 3 | _____ |
| CIT 236 | Data Structures | 3 | _____ | MGT 320 | Principles of Management | 3 | _____ |
| CIT 238 | Algorithms | 3 | _____ | CIT | Senior Project or Internship (C) | 3 | _____ |
| CIT 260 | Instrumentation | 3 | _____ | 490/470 | | 3 | _____ |
| CIT 263 | Web Programming I | 3 | _____ | MTH 140 | Applied Calculus | 3 | _____ |
| CIT 265 | C# NET Programming | 3 | _____ | STA 225 | Applied Math Reasoning (CT) | 3 | _____ |
| CIT 313 | Web Programming II | 3 | _____ | IST 111 or | Living Systems or Introduction to | 4 | _____ |
| CIT 332 | Software Engineering I | 3 | _____ | BSC 104 | Biology | 3 | _____ |
| CIT 333 | Software Engineering II | 3 | _____ | NRE 212 | Energy | 3 | _____ |
| CIT 352 | Network Protocols and Admin | 3 | _____ | _____ | Physical/Natural Science Elective | 4 | _____ |

AREA OF EMPHASIS

Students who wish to add an area of emphasis in Web and Mobile Applications Development must take the following courses:

| CODE | COURSE NAME | HRS | GRADE | CODE | COURSE NAME | HRS | GRADE |
|---------|--------------------------------|-----|-------|---------|----------------------|-----|-------|
| CIT 410 | Electronic Commerce | 3 | _____ | NRE 423 | GIS and Data Systems | 3 | _____ |
| CIT 466 | Database Programming | 3 | _____ | _____ | Free Elective | 3 | _____ |
| _____ | CIT 300/400 Technical Elective | 3 | _____ | _____ | Free Elective | 3 | _____ |
| _____ | CIT 300/400 Technical Elective | 3 | _____ | _____ | Free Elective | 3 | _____ |
| _____ | CIT 300/400 Technical Elective | 3 | _____ | | | | |

MAJOR INFORMATION

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- Coursework listed as "elective" may vary for each student. Students are encouraged to use elective hours toward a minor or toward prerequisites.
- Students are strongly encouraged to select courses that meet two or more Core or College requirements. For example, a writing intensive literature course could satisfy the Core II Humanities requirement as well as the University writing intensive requirement.
- Course offerings and course attributes are subject to change semesters. Please consult each semesters schedule of courses for availability and attributes.
- Math is based on an ACT Mathematics score of 24 or higher. Students with

- an ACT Mathematics score less than 24 will be placed in the appropriate prerequisite mathematics and science courses.
- The Computer and Information Technology major is a four-year program that requires a minimum of 120 credit hours, 40 of which must be at the 3xx-4xx level.

COMPUTER INFO & TECH COMPUTER APPLICATION DEVELOPMENT

A major in Computer and Information Technology provides a solid grounding in the information technology field. CIT is a cutting-edge program rooted and grounded in courses that are both highly theoretical while also extremely applied in nature. It focuses on the development of computer applications for business, industry, and education that run on the personal computer or that integrate various hardware pieces into the computer system as a whole. Students will learn the software engineering process and project management and learn to program in languages such as C++ and C#. Students also learn to specify, design, and build large-scale software systems for existing hardware.

| YEAR ONE | FALL SEMESTER | | | | SPRING SEMESTER | | | |
|----------|-------------------------|-----------------------------------|-----------|-------|--------------------|------------------------------|-----------|-------|
| | CODE | COURSE NAME | HRS | GRADE | CODE | COURSE NAME | HRS | GRADE |
| | IST 150 | Spreadsheet & Database Prin | 3 | _____ | CIT 163 | Intro to Programming C++ | 3 | _____ |
| | ENG 101 | Beginning Composition | 3 | _____ | CMM 103 | Fund Speech Communication | 3 | _____ |
| | NRE 111/ | Living Systems or Introduction to | 4 | _____ | ENG 201 | Advanced Composition | 3 | _____ |
| | BSC 104 | Biology | 3 | _____ | FYS 100 | First Year Sem Crit Thinking | 3 | _____ |
| | _____ | Multicultural or International | 3 | _____ | STA 225 | Introductory Statistics (CT) | 3 | _____ |
| | _____ | Core II Social Science (CT) | 3 | _____ | | | | |
| | TOTAL HOURS | | 16 | | TOTAL HOURS | | 15 | |
| | Summer Term (optional): | | | | | | | |

| YEAR TWO | FALL SEMESTER | | | | SPRING SEMESTER | | | |
|----------|-------------------------|-------------------|-----------|-------|--------------------|-----------------------------|-----------|-------|
| | CODE | COURSE NAME | HRS | GRADE | CODE | COURSE NAME | HRS | GRADE |
| | CIT 236 | Data Structures | 3 | _____ | ART 214 or | Foundations: Grid/Chroma or | 3 | _____ |
| | CIT 260 | Instrumentation | 3 | _____ | 219 | Foundations: Frame/Time | 3 | _____ |
| | CIT 263 | Web Programming I | 3 | _____ | CIT 238 | Algorithms | 3 | _____ |
| | _____ | Core II Fine Arts | 3 | _____ | CIT 313 | Web Programming II | 3 | _____ |
| | MTH 140 | Applied Calculus | 3 | _____ | IST 264 | Technology Foundations | 3 | _____ |
| | | | | | _____ | Core II Humanities | 3 | _____ |
| | TOTAL HOURS | | 15 | | TOTAL HOURS | | 15 | |
| | Summer Term (optional): | | | | | | | |

| YEAR THREE | FALL SEMESTER | | | | SPRING SEMESTER | | | |
|------------|-------------------------|--------------------------------|-----------|-------|--------------------|-----------------------------------|-----------|-------|
| | CODE | COURSE NAME | HRS | GRADE | CODE | COURSE NAME | HRS | GRADE |
| | CIT 265 | C# NET Programming | 3 | _____ | CIT 333 | Software Engineering II | 3 | _____ |
| | CIT 332 | Software Engineering I | 3 | _____ | CIT 410 | Electronic Commerce | 3 | _____ |
| | CIT 365 | Database Management | 3 | _____ | _____ | CIT 300/400 Technical Elective | 3 | _____ |
| | _____ | CIT 300/400 Technical Elective | 3 | _____ | _____ | Physical/Natural Science Elective | 4 | _____ |
| | _____ | Writing Intensive | 3 | _____ | _____ | Free Elective | 3 | _____ |
| | TOTAL HOURS | | 15 | | TOTAL HOURS | | 16 | |
| | Summer Term (optional): | | | | | | | |

| YEAR FOUR | FALL SEMESTER | | | | SPRING SEMESTER | | | |
|-----------|-------------------------|-----------------------------|-----------|-------|--------------------|--------------------------------|-----------|-------|
| | CODE | COURSE NAME | HRS | GRADE | CODE | COURSE NAME | HRS | GRADE |
| | CIT 352 | Network Protocols and Admin | 3 | _____ | _____ | CIT 300/400 Technical Elective | 3 | _____ |
| | CIT 466 | Database Programming | 3 | _____ | MGT 320 | Principles of Management | 3 | _____ |
| | NRE 423 | GIS and Data Systems | 3 | _____ | _____ | Free Elective | 3 | _____ |
| | NRE 212 | Energy | 3 | _____ | _____ | Free Elective | 3 | _____ |
| | _____ | Writing Intensive | 3 | _____ | CIT | Senior Project or Internship | 3 | _____ |
| | | | | | 490/470 | | | |
| | TOTAL HOURS | | 15 | | TOTAL HOURS | | 15 | |
| | Summer Term (optional): | | | | | | | |

Area of Emphasis

Major Requirement

College Requirement

General Education Requirement

Milestone Course: This is a key success marker for your major. See your advisor to discuss importance of this course in your plan of study.

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CIT - COMPUTER APPLICATION DEVELOPMENT - 2019-2020

INVOLVEMENT OPPORTUNITIES

- Student Government Association
- Campus Activity Board
- JMELI
- Commuter Student Advisory Board
- Community Engagement Ambassadors
- Club Sports
- Religious Organizations
- Political Organizations
- Residence Hall Association
- Cultural Organizations
- National Society of Leadership and Success
- Greek Life

RELATED MAJORS

- Computer Science
- Computer and Information Security
- Mechanical/Civil Engineering
- Digital Forensics

GRADUATION REQUIREMENTS

- Have a minimum of 120 credit hours (some colleges or majors require more);
- Have an overall and Marshall Grade Point Average of 2.00 or higher;
- Have an overall Grade Point Average of 2.00 or higher in the major area of study;
- Have earned a grade of C or better in English 201 or 201 H;
- Have met all major(s) and college requirements;
- Have met the requirements of the Core Curriculum;
- Have met the residence requirements of Marshall University, including 12 hours of 300/400 level coursework in the student's college (see section entitled "Residence Requirements" in the undergraduate catalogue);
- Be enrolled at Marshall at least one semester of the senior year;
- Have transferred no more than 72 credit hours from an accredited West Virginia two-year institution of higher education.

Colleges and specific programs may have unique requirements that are more stringent than those noted above. Students are responsible for staying informed about and ensuring that they meet the requirements for graduation.

This academic map is to be used as a guide in planning your coursework toward a degree. Due to the complexities of degree programs, it is unfortunate but inevitable that an error may occur in the creation of this document. The official source of degree requirements at Marshall University is DegreeWorks available in your myMU portal. Always consult regularly with your advisor.

YEAR ONE



Have questions? Need to talk? You already have a Friend-At-Marshall ready to help you succeed. Find your FAM Peer Mentor here: www.marshall.edu/fam



Stay on the Herd Path and come to class! Class attendance is more important to your success than your high school GPA, your class standing, or your ACT/SAT scores.



In order to graduate on time, you need to take an average of 15 credits per semester. Are you on track? Take 15 to Finish!



Develop relationships with professors who can serve as future references by attending their office hours.



Declare an area of emphasis within CIT before your 30th hour. Participate in a Career Exploration Experience (job shadow) to help decide career goals.



Join or create a club or organization on campus about a particular issue you care about. Marshall has more than 200 student organizations.



Attend an intercultural festival or event on campus or in town.

YEAR TWO



Are you completing enough credits to graduate on time? Dropping or failing a class can put you behind. Use summer terms to quickly get back on track.



Take a Community Based Learning (CBL) class that connects course content to the community. Stay engaged and make a difference.



Think about who can help you grow as a student and a professional—professors, advisors, alumni, etc.—and ask at least one to be your mentor.



Join professional associations in your field, like ACM or IEEE.



Have you considered adding a minor? Think about personal areas of interest you'd like to explore or how you might enhance your major with a related skill set.



College is a great time to experience the world! Consider studying abroad in the summer, during Spring Break, or for an entire semester.



Meet with a career education specialist to conduct a "gap analysis." Figure out the skills you'll need for the career you want while you still have time to build them.

YEAR THREE



Team up with a faculty mentor and apply for the John Marshall Scholars Award.



No need to wait until graduate school. Discuss undergraduate research opportunities with faculty in your major right now.



Are you on track to graduate? Meet with your advisor for your Junior Eval to make sure you know what requirements you have left.



Be at the top of your professional game! Prepare a final resume and practice your interview skills with a career coach in Career Education.



Networking is key! Attend a Career Expo to seek employment opportunities and network with employers in your field.



Join the Marshall Mentor Network and connect with professionals in your field to discuss your major, career path, and more.



Wanting to learn about a topic outside of those we offer? Consider an independent study.

YEAR FOUR



This is it! Are you on track to graduate? Meet with your advisor for your Senior Eval to see what requirements you have left.



Don't enter your field with zero experience! Secure an internship related to your field of study.



Apply to be a New Student Orientation Leader or a Campus Tour Guide.



Did you do really well in a hard course? Become a Tutor or a Supplemental Instructor.



Talk to faculty about pursuing optional professional certifications.



Take a pulse check. Know what you need to do every year to keep your grants, scholarships, or federal financial aid.



Want to continue your education and increase your opportunities? Talk to a faculty member about whether graduate school fits your career goals.

TRANSFERABLE SKILLS ASSOCIATED WITH THIS MAJOR

- Scientific Knowledge
- Communication Skills
- Ability to Work as Part of a Team
- Technology Literacy
- Flexibility
- Problem Solving
- Needs Assessment
- Integration of Technologies

ASSOCIATED CAREERS

- Application Development
- Software Solutions
- Data Validation
- Research Science
- Project Management
- Database Administration
- Product Development
- Process Development
- Analysis
- Quality Assurance/Control
- Environmental Analyses
- Forensics
- Agriculture
- Medicine
- Chemical Engineering
- Materials Science
- Pharmaceuticals
- Education
- Healthcare
- Sales
- Marketing



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