

WEB APPLICATION DEVELOPMENT & PROGRAMMING

MASTER PLAN OF INSTRUCTION

2023 - 2024

Bill Sandifer, Instructor



MISSION

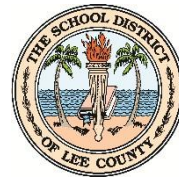
The mission of Fort Myers Technical College is to provide high quality career and technical training, in order to prepare students for current and emerging industries, delivered by a professional and caring staff in a positive learning environment.

The School Board of Lee County, Florida does not discriminate nor tolerate discrimination on the basis of race (including anti-Semitism), color, ethnicity, national origin, sex, sexual orientation, gender identification, gender expression, disability (physical or mental), pregnancy, marital status, age (except as authorized by law), religion, military status, socioeconomic status, linguistic preference, genetic information, ancestry, or any other reason protected under applicable federal, state, or local law in the provision of educational programs, activities or employment policies as required by Title II, Title VI, and Title VII Civil Rights Act of 1964 including, Title IX of the United States Education Amendments of 1972, Age Discrimination in Employment Act of 1967 (ADEA), Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973, Florida Civil Rights Act of 1992, Genetic Information Nondiscrimination Act of 2008, Americans with Disabilities Act of 1990 (ADA) and the Amendment Act of 2008 (ADAAA), and the Florida Educational Equity Act of 1984. The School Board also provides equal access of its facilities to youth groups, as required by the Boy Scouts of America Equal Access Act. Any sections of the District's collectively bargained, negotiated agreements dealing with hiring, promotion, and tenure will contain a statement of nondiscrimination similar to that in the Board's statement above. As required by Florida's Educational Equity Act, the Superintendent shall submit an annual equity report addressing the District's educational and employment practices. The School Board of Lee County, Florida, prohibits retaliation by any District personnel against a person for reporting, filing or being a witness in a discrimination (including harassment) charge, complaint, investigation or lawsuit associated or in connection with this policy. Established grievance procedures and appropriate discrimination complaint forms are available from the Office of Civil Rights & Equity, Academic and Student Support Services or the Equity Coordinator at each school. Complaints/inquiries regarding compliance with these regulations may be submitted in writing to: For Employees: Office of Civil Rights & Equity Compliance at (239) 337-8134 or at CivilRightsEquity@leeschools.net. For Students: Office of Positive Prevention at (239) 939- 6858.

Lack of English language skills will not be a barrier to admission and participation. The District may assess each student's ability to benefit from specific programs through placement tests and counseling, and, if necessary, will provide services or referrals to better prepare students for successful participation.



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Web Application Development & Programming is designed to provide a basic overview of current business and information systems and trends and to introduce students to the basics and foundations required for today's business environments. This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Information Technology career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Information Technology careers.

The content includes but is not limited to the fundamentals of programming and software development; procedural and object-oriented programming; creating web-based applications, including testing, monitoring, debugging, documenting, and maintaining applications.

PROGRAM MISSION

The mission of Web Application Development & Programming is to prepare students for careers in a variety of web-related occupations. You will be provided the tools you will need to start your web development career. You will be learning HTML, CSS, JavaScript, PHP, SQL and other programming languages. This includes testing, monitoring, debugging, documenting, and maintaining applications. Plus, you will be acquiring the software, business, and employability skills needed for a success career.

PROGRAM PHILOSOPHY

The program's philosophy is "nobody is left behind." Regardless of your learning style or background in information technology, your instructor will do everything possible to ensure your comprehension of the material. You can rest assured that your learning experience is our first priority.

We believe that competent workers in information technology need:

- Skills in communications, critical thinking, teamwork, and effective work habits
- Training in emerging concepts and technologies
- Relevant work-based learning experiences

We will provide a caring atmosphere that promotes a high degree of student-faculty interaction and fosters development of business and industry partnerships.

PROGRAM CONTENT

The topics covered include:

- Microsoft Office
- Programming Logic & Design
- Web Technology job roles
- Web page development skills
- Fundamentals of networking
- Universal Windows App development
- Advanced HTML5 and CSS3
- Designing user interfaces UX & UI
- Social Media
- Data Analyst
- JavaScript
- Database Design
- SQL
- GitHub
- Photoshop
- Web Design
- WordPress
- User authentication

- Session management
- Employability skills

ESSENTIAL TRAINING TASKS

Physical Requirements

- View text at short range and long range, and detect errors such as a missing semi-colon.
- Remain seated for extended periods of time, with short breaks of 30-90 seconds every 20 minutes.

Cognitive Requirements

- Listen to and understand information and ideas presented through spoken words and sentences.
- Communicate information and ideas in speaking so others will understand.
- Determine when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Read and understand information and ideas presented in writing.
- Develop specific goals and plans to prioritize, organize, and accomplish your work.

ACCOMMODATIONS

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's IEP or 504 plan or post-secondary student's accommodations plan to meet individual needs to ensure equal access. Post-secondary students with disabilities must self-identify, present documentation, required accommodations if needed, and develop a plan with their post-secondary service provider. Accommodations received in post-secondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and services provided are maintained in a confidential file.

TUITION

Tuition is charged for adult students at a reasonable rate that may vary slightly from year to year and is due prior to the first day of each payment period. Current fee information is available from Student Services. Tuition is waived for eligible high school dual-enrolled students. Failure to pay all fees due at the time class begins will result in the student not being able to attend class and/or clinical.

CLASS SCHEDULE

Classes meet Monday through Friday from 8:00 A.M. until 2:30 P.M. This amounts to 30 hours of classroom instruction per week. Lunch breaks are 30 minutes in length.

ATTENDANCE POLICY

In an effort to develop appropriate employability skills, FMTC students are expected to attend all class sessions. As is expected in the workplace, when it is necessary to be absent due to illness or emergency situations, all students are to notify the instructor on or before the date of the absence. The student attendance policy for each post-secondary program is consistent with industry standards.

Campus attendance is kept via a computerized system. It is the responsibility of the student to **log in and out** in order to receive credit for class time. This allows the school to keep accurate attendance records for the actual number of hours and minutes attended.

All adult students are expected to be in attendance at least 90% of their scheduled hours during each payment period. Adult students failing to maintain the 90% attendance standard may not be permitted to continue in their program and may be withdrawn.

Absences

A student who is absent for 6 consecutive class sessions, without prior approval and without contacting the instructor, will be withdrawn from enrollment in his/her program.

Students who are late for class, including returning late from lunch, must clock in. Students who leave school early must notify their instructor and clock out. This time out of class is recorded as time absent and is counted against the required 90% attendance.

Adult students who know they will be out of school for an extended period of time may apply for a Leave of Absence from their program. Students who exercise a leave of absence may have to extend their time in their program and pay additional fees.

Leaving Campus During School Hours

Students must notify their instructor when leaving campus early. This is for the safety of students, to accurately track time, and to allow the instructor to best utilize instructional resources.

PLAN OF INSTRUCTIONAL PRACTICES

Teaching Methods

These include hands-on coding exercises, client project work, lecture presentations, group work, and independent learning through viewing of online videos.

Safety

The student is expected to adhere to safety standards in a normal I.T. environment such as:

- Exercising caution when handling electronic equipment
- Walking (not running, with rare exceptions)
- Not throwing objects
- Not bringing food/drink into the classroom environment

Evaluation

Class performance, quizzes, tests, attendance, portfolio assessments, completion of project assignments, decision-making, work habits, achievement of entry-level competencies, and other methods are used for evaluation.

Work-Based Activities

Work-based learning activities play an integral part of the curriculum of FMTC's career-technical training programs. These activities are planned with two objectives in mind. First, the activity provides students with the opportunity to develop and apply 'real world' experience using the knowledge and skills attained in the program. Second, the activity provides the instructor with objective input from potential employers or customers of program graduates. Each work-based activity has a written instructional plan outlining objectives, experiences, competencies, and evaluation required during the activity.

Work-based activities are program specific and may include:

- Unpaid in-school shop activities to provide customer service opportunities under the direct supervision of the program instructor.
- Unpaid job shadowing experiences that may include in-school or off-campus employer-based experiences under the supervision of a qualified employer representative who is working closely with the program instructor.
- Paid or unpaid cooperative training experiences conducted at the employer's work location under the supervision of a qualified employer representative and under the direction of the program instructor.

Cooperative Education

Cooperative training is available for students and coordinated by the instructor and career specialist. Cooperative training is for students who have shown competence in program training that indicates readiness for placement in an on-the-job program. High school students participating in the cooperative job placement program must be in the 12th grade. To be eligible for a cooperative education experience, students must have completed at least one-half of the required program hours and requirements.

Student may be returned to the program for additional training if they do not function satisfactorily on the job or when the cooperative agreement is terminated at the request of the student, parent, employer, or program instructor. Veterans will be accepted into the program in accordance with the Department of Veterans Affairs approved program.

Additional information regarding cooperative training opportunities may be obtained from the program instructor or career specialist.

GRADING POLICIES

Grading Categories:

Assessments	33%
Career Application	34%
Employability Skills	33%

Grading Scale:

A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

Each program has an employability skills rubric based on employee expectations in the industry.

Program Progress

Students are required to complete the program of training within the hours allotted by the state of Florida for completion. Progress must be at a rate that will allow completion of the program with the number of hours stated in the Curriculum Frameworks.

Work Habits

Effective work habits are the cornerstone to successful employment. Students are expected to demonstrate productive work habits during all phases of enrollment. Instructors will work with students who need assistance in this area to improve all overall possibility for successful employment.

Attendance: Attends class, arrives/leaves on time; begins and ends work as expected.

Character: Displays loyalty, honesty, trustworthiness, dependability, reliability, initiative, self-discipline, and self-responsibility; displays a high level of effort and commitment to performing and completing work.

Teamwork: Respects the right of others; respects confidentiality; is cooperative; is assertive; displays a customer service attitude; seeks opportunities for continuous learning; demonstrates mannerly behavior; encourages and facilitates cooperation, pride, trust, and group identity; fosters commitment and team spirit.

Appearance: Displays appropriate dress, grooming, hygiene, and etiquette; wears full regulation uniform.

Attitude: Displays a willingness to cooperate and accept constructive criticism; sets realistic expectations; approaches assignments with interest.

Productivity: Is prepared for class by reading assignments and completing homework; contributes to class discussions; and involvement in lab activities (in other words, no sleeping or daydreaming). Follows safety practices; conserves and maintains equipment and supplies; keeps work area neat and clean; follows directions and procedures; makes up assignments and tests punctually; notifies proper authorities of situations presenting potential safety hazards; does not use or knowingly permit others to use tools and equipment improperly; stays on task and utilizes time constructively.

Organization: Manifests skill in prioritizing and managing time and stress; demonstrates flexibility in adapting to changes.

Communication: Communicates accurate information to others in a professional and courteous manner; displays appropriate nonverbal (eye contact, body language) and oral (listening, telephone etiquette, grammar) skills; asks pertinent questions; listens attentively to others, notifies instructor in advance of absences or tardies.

SATISFACTORY ACADEMIC PROGRESS

In order to receive and continue to receive financial assistance of any type, a student must maintain satisfactory academic progress. The Financial Aid Administrator will require a progress report to be completed and submitted to the Financial Aid Office prior to each disbursement.

Students are considered to be making Satisfactory Academic Progress (SAP) if they successfully complete their scheduled clock hours, achieve a specific cumulative grade average (CGA), and do not exceed the maximum time limits to complete

their course of study. Each student's academic progress will be checked at 450 clock hours (300 hours for CHCA) and prior to subsequent disbursements for students enrolled in programs one academic year or greater. Progress will be checked at the half-way point for programs less than one academic year.

No SAP is required prior to the first disbursement.

REQUIREMENTS FOR CERTIFICATE

Certification for FULL program completion is determined by (1) mastery of 85% of program competencies as determined by the instructor, (2) a final grade of 75% or better (80% Health Sciences) in each course, and (3) proof of state-mandated basic skills levels; (4) attendance of a minimum of 90% of scheduled program hours (95% of scheduled hours for some Health Science programs). Under unique circumstances, instructors in our competency-based programs have the discretion to graduate students who fall short of 90% as long as #1-3 above are met. Students meeting these requirements are awarded a full program certificate.

A record of the student's progress is kept up-to-date by the instructor and available to the student in the FOCUS Student Portal. High school grades are reported to the assigned high school.

DRESS CODE

Each program at FMTC has a designated uniform.

Uniform Required: FMTC black uniform polo shirts, casual pants or jeans, appropriate length skirts or dresses, appropriate closed toe shoes, and visible FMTC student ID badge.

PROGRAM STRUCTURE

Below is a summary of the Web Application Development & Programming program structure. For more detailed information for each course, visit the FLDOE Curriculum Framework website: <https://www.fldoe.org/academics/career-adult-edu/career-tech-edu/curriculum-frameworks/2023-24-frameworks/info-technology.stml>.

OCP A Information Technology Assistant

This course is designed to provide a basic overview of current business and information systems and trends and to introduce students to the basics and foundations required for today's business environments.

OCP B Computer Programmer Assistant

This course establishes the foundation for software development. Students will learn about various types of programming languages and focus on using the C# programming language to create basic interactive computer programs.

OCP C Computer Programmer

This course uses the C# programming language to cover the key concepts of object-oriented programming.

OCP D Web Programmer

Students will master a variety of authoring, scripting and programming languages including but not limited to HTML5, CSS3, JavaScript, and C++

TEXTBOOKS

Required textbooks for Web Application Development & Programming can be found on the disclosure fee sheet located on the program's page on the FMTC website: <https://fortmyerstech.edu/course/web-application-development-programming/>