

PROGRAM SYLLABUS

Program: Programming, Databases & Website Development

National Career Cluster: Information Technology

Michigan Career Pathway:

Business/Management/Marketing & Technology

Instructor: David Ely

**Credentials: Temporary Vocational Authorization, BMMT
Oracle SQL and Database Certified**

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CAPITAL AREA CAREER CENTER MISSION AND EXIT OUTCOMES

The mission of Capital Area Career Center is to provide students with the essential skills and life-long learning ability in order for them to enter, compete, and advance in the work place.

It is our vision that all students will leave with the following skills:

- Life-Long Learning Skills
- Problem Solving/Critical Thinking Skills
- Effective Work Habits and Attitudes
- Technology
- Career Development Skills
- Specific Occupational Skills

CREDIT AVAILABLE

1. Elective Credit: Recommended by CACC and awarded by sending school.
2. Mathematics Credit Substitution/Waiver Available

In some situations students may be able to substitute academic credit such as math, language arts, or science for part of elective credit. ***A policy sheet is attached. For more information the student should see his/her teacher and sending school counselor.***

Program Mission and Purpose:

Mission Statement

The mission of Programming, Databases and Website Development is to give students the opportunity to learn the fundamentals and advanced techniques of programming, databases and professional website development skills through hands on activities and projects. All students participate in a variety of work based learning experiences such as field trips and guest speakers to focus their career goals. Work habits such as teamwork, attendance, high quality work and other skills required for jobs are integrated into all class work and reinforced with a student's membership in Business Professionals of America.

Who can take this class?

This program may be taken as a one year program by both juniors and seniors. The program is designed to give students marketable skills in the areas covered as well as prepare them for jobs, careers and college. As a result of their first year studies, some students find particular areas on which they choose to focus their learning at an advanced level. These students, after successfully completing one year of class as juniors may choose to return for a second year with instructor approval. Curriculum for second year students is designed in accordance with the student's specific interests, needs and desire for additional college credit.

Student Organizations:

Business Professionals of America (BPA)

At the beginning of the year, students may choose to participate in our student chapter of Business Professionals of America.

Students choosing to become members of BPA benefit in the following ways:

- Opportunity to be elected as chapter officer such as President, Vice President, Secretary, Treasurer, Historian or Parliamentarian. Elected officers will attend a one day fall leadership conference along with other officers from Michigan schools.
- Students choose several events in which they want to compete at a regional competition. There are over 70 events to choose from. If the student places high enough (several winners in each event continue to states) at the regional competition they will advance to the state competition and conference. Students winning at state conference may compete at the national conference held in fun cities across the United States. Plaques, certificates and medals are awarded to winners' at all three competitions.
- Learn and demonstrate the ability to dress and act in a professional manner. All competitions require adherence to a strict dress code and require professional conduct.

Student Forum

The student forum similar to student councils is composed of students and facilitated by the principal. Each class sends a student as a representative. Representatives from each class meet once or twice a month to discuss and choose school activities and resolve issues. Any student interested in this should contact the teacher.

Program Exit Outcomes:

- Proficient use of computers and computer software, including word processing, spreadsheet, database, and presentation software.
- Effective oral and written communication skills, including presentation, grammar, spelling, and punctuation skills.
- Design and creation of effective high quality websites, computer programs and databases.
- Teamwork and leadership skills.
- Exploration of careers pertaining to student's interests and abilities and preparation for higher education.
- Business etiquette skills.
- Employability skills to seek, obtain, and keep a job.

Recommendations for success in this program (pre-requisites/enrollment):

- Good communication skills, including 11th grade reading and writing level.
- Good attendance (no more than 2 absences each term)
- Positive attitude and a sincere interest in a technology class.

College Credit Opportunities:

First year students in class have the opportunity to earn nine (9) credits at Lansing Community College (LCC). To earn these credits, students must achieve at least an 80% on 80% of the expected student outcomes for the particular LCC class. The curriculum covered in this class is designed to allow students to cover these LCC expected outcomes while doing the class work. A student achieving at least an 80% as described above may achieve credit for the following LCC classes. Lansing Community College credit is limited to 16 credits for each student.

First Year Students (9 credits)

CITW 150	3cr	Internet Literacy
CITP 110	4 cr	Intro Computer Programming
ARWS 201	1 cr	Macromedia Dreamweaver I
ARWS 203	1 cr	Macromedia Flash I

First and second year students have the opportunity to earn additional LCC credit (up to 16 credits) by completing the following coursework during this class. The same 80% score and 80% of outcomes described above applies.

CITW 160	3cr	Developing Pages for the Web
CITP150	4cr	Introduction to VB.NET Programming
CITP 250	4cr	Advanced VB.NET Programming
CITN120	3cr	Introduction to Networking
CITN220	3cr	Networking Concepts

Work Based Learning Opportunities:

Work based opportunities vary each year depending on our business partners. Past work based opportunities include field trips, guest speakers and job shadows.

Grading:

Students final grades are composed of 50% assignments, 20% hours 30% work habit skills described further below.

Graded assignments 50%

Including but not limited to end of chapter assignments, quizzes, tests and projects. Each assignment is worth a given amount of points. The time required and complexities of the assignment determine its points. Students earn points for their work when it is of high quality and functional. Students will need to make corrections to their work until it is functional and high quality.

Hours (Production) 20%

Each assignment will have a number of hours associated with it. These hours are determined from the book and past history. Each week students have, on average 10 hours to complete assignments. A student who has completed 10 hours of assigned work will receive 10hrs completed/10 hrs assigned (100% of hours) or all the 20%. A student who has completed 8 hours of assignments out of 10 assigned hours of work will receive an 80%.

Team assignments

Students working in teams will be asked to show evidence of equal participation and contribution to the team.

Work Habits 30%

Students are graded on the following work habits as described in the Student/Parent Handbook.

During class each day, students should continually strive to improve their work habits.

The student's goal should be to consistently demonstrate work habits that would impress and exceed an employer's expectations.

Thirty percent (30%) of the student’s grade is based on the work habits below. These habits are evaluated by both the student and the teacher on a routine basis. During this evaluation, students have the opportunity to explain their work habit skills progress. A description of these work habits may be found in the Student/Parent Handbook.

- Attendance & Participation
- Safety and Care of Work Area and Equipment
- Good Judgment and Serious Effort
- Cooperation and Teamwork
- Self Discipline and Responsibility
- Dress, Grooming and Appearance

		Work Habits Rating Scale				
Work Habits		5	4	3	2	1
How often?		Always	Most of the time	Usually	Some of the time	Rarely
		Exceeds Expectations	Employable	Acceptable for Classroom credit	Needs Improvement	Not Yet
Attendance & Participation		0-1 Absences/Tardies & Non-Participation	2-3 Absences/Tardies & Non-Participation	4-6 Absences/Tardies & Non-Participation	7-9 Absences/Tardies & Non-Participation	10+ Absences/Tardies & Non-Participation

Internships and Work Based-Learning

Internships and work-based learning are evaluated by the employer each term. The student will be evaluated on both skills and work habits on an evaluation form. This evaluation becomes a pro-rated portion of the student’s grade for the term.

Examples:

6 week internship during a 9 week marking period:

2/3 of the grade = internship evaluation

1/3 of the grade=class academics (70%) and work habits (30%)

Cooperative work-based learning (unpaid or paid) - 2 school days at work and 3 days in class.

2/5 of the grade = co-op evaluation by employer

3/5 of the grade = class academics (70%) and work habits (30%)

Attendance and Dress:

See the CACC student handbook for questions on attendance or appropriate dress. Any other attendance questions can be answered by calling the CACC attendance office at 244-1306. In addition to the dress code specified in the student handbook, this program has its own dress code policy. This policy is based on BPA standards as well as business dress codes. The intention of this policy is to ensure our students always make a favorable impression with anyone they may meet.

Course Topics:

Academic (Mathematics, Reading, Writing and Study Skills)

Students will use Keytrain software and complete assignments in class to improve their math, reading, and writing skills. Because this class integrates math with many assignments, math credit is available (see pg 1) for most students. Student's abilities in these areas are assessed using the WorkKeys assessments. These are not part of the student's grade but are used to determine areas where improvement is needed. Math, reading and writing skills are integrated into class assignments and projects. Study skills are taught and integrated in all assignments.

Career and Job Preparation

Create resumes, cover letters and practice interview skills. Demonstrate the ability to research and apply for online jobs. Students explore their personal values and strengths, learning styles and abilities as they relate to their career interests. All senior students will have the opportunity to apply to Lansing Community College. Information technology related business tours, guest speakers and job shadows provide more information on career interests.

Website Development

Students learn web design and customer skills working on customer projects. The ability for students to create websites using "handwritten" HTML and CSS is emphasized. Students learn to use business software such as Macromedia Dreamweaver and Flash to create websites. Students use Adobe Photoshop, Macromedia Fireworks and Audio & Video editing software to enhance their web site. With parental permission, student work will be displayed on the class website www.codepros.org.

Game and Computer Programming

Using the latest computers and software, students complete projects using Basic, Visual Basic and Visual Basic .NET to learn programming fundamentals as well as more advanced skills. As a member of Microsoft's Academic Alliance we have the latest Microsoft programming, database and web software. We also receive monthly updates to ensure students are using the latest software and learning skills that businesses are using.

Computer Game programming skills are learned using software such as BlitzBasic, Dark Basic, GameMaker and Game Studio. Students use 3-D modeling and rendering software such as Maya and 3dsMax to create game characters, and environments.

www.codepros.org

Databases

Students will design and build relational databases using MySQL and Microsoft Access. Students create websites and computer programs which interact with these databases. Basic SQL commands will be applied to database projects.

Academic Advisory Committee:

To ensure students are learning up to date skills required for jobs and college, all curriculum and software used in this program have been reviewed by an advisory committee. The committee consists of local area Information Technology business leaders and a parent and student if we have volunteers. As a parent of a student in this class you can provide valuable feedback. We meet twice each year; once at the beginning and again towards the end. If you are interested in doing this please let me know.

Scholarships:

If eligible, senior students may apply for various CACC scholarships. Students are encouraged to apply for any college scholarships such as Lansing Community College for which they are eligible.

This program aligns with the National Career Cluster and the Michigan Curriculum Framework Academic, Technology, and Career and Employability Skills Standards.