



## COMP 1120 Foundations of Computing (DiscoverIT)

<b>Class Website URL</b>	<a href="http://online.projectsocrates.org">http://online.projectsocrates.org</a>
<b>Teacher Contact Information</b>	Mr. Roggenkamp jroggenkamp@mncsc.org
<b>High School Credits</b>	0.5 high school credits
<b>Concurrent Enrollment</b>	South Central College COMP 1120 Foundations of Computing 4 college credits
<b>Course Description</b>	<p>This course introduces the student to the world of information systems. Students will explore the history of computing, career opportunities in information technology, and computer concepts as they apply in a business environment. Topics to be covered include an introduction to basic web-site development, command-line interfaces, file management principles, computer numbering systems, and database principles. Students will also receive initial exposure to the IBM mid-range computer platform and computer programming and algorithms through the use of problem analysis, pseudo-code and entry level programming languages. (Prerequisite: None)</p>

# Welcome to SourceCode Academy!

## Congratulations!

Congratulations on being accepted into SourceCode Academy and taking the next step toward exploring careers in computers and information technology. I'd like to introduce myself and outline what you can expect in the upcoming school year.

## What Is SourceCode Academy?

SourceCode Academy is different from other high school classes you have taken in several ways:

- You earn transferable **college credits** from South Central College for each class you take at no cost to you.
- The class is delivered **mostly online**; you will see the teacher in person a few times each month.
- The classes have a strong **industry focus**. You will get a feel for what information technology professionals do on a day to day basis, and we'll be pulling in industry veterans who can talk about their own experiences.
- The class is **project-based**. You will learn in-demand skills by working on real IT projects.

## Course Description and Goals

This course will help you discover the field of information technology.

The learning activities and project work emphasize time management, problem solving, and professional communications.

### Course Goals:

- **Discover the excitement of IT.** Technology is everywhere. This course will help you discover your interests, skills, and values to help you determine career choices. You'll learn how information technology is a critical component with almost every career choice.
- **Solve problems.** Learning how to communicate complex ideas and how to break down problems into logical pieces.
- **Communicate as a professional.** Speaking with precision, writing in a professional manner, and being able to listen.
- **Demonstrate successful time management.** Complete projects early or on time, based on client specifications.

- **Improve your typing speed** by 50% or more by the end of the course.

## What's Different About Online Classes?

Online classes require more self-discipline than traditional classes for a couple of reasons:

- If you are having trouble with an assignment, it is your responsibility to be **proactive** and reach out to me. If you don't tell me you're having trouble with something, I won't know!
- I won't be standing in front of the class and giving you step-by-step instructions on how to complete projects. Instead, all of the content will be delivered through the course website. It is your responsibility to **become familiar with all assigned readings, videos, exercises, and other learning materials.**
- There won't be a teacher reminding you every day when assignments are due. Instead, due dates are clearly posted on the website. It is your responsibility to **check the website for assignment due dates** because commonly, this is the only reminder you will have.
- Communications are **asynchronous**. This means that when you send a message to the teacher, there might not be an immediate response - it can sometimes take a full day. Therefore, you need to **plan ahead**. Make sure you're communicating any concerns with the teacher **before** they become urgent.

## What Can I Expect This Semester?

The first class in the Academy is **DiscoverIT**. In it, we survey a wide range of areas in information technology, focusing on a different topic each week.

Each week, you will have required readings (or videos), along with a project that will demonstrate your mastery of the material. You'll gain technical skills in programming & data manipulation, as well as critical thinking skills in social issues presented by information technology. Here is a sample of topics you'll learn about:

- Building your first website
- Client / server systems
- Designing information systems for security vs convenience
- Hexadecimal and binary number systems
- Computer architecture
- Tracking and privacy
- Programming with Javascript
- Development methodologies and project management
- Career and education options
- Copyright law in IT
- Database systems and data visualization

Here's how the course will typically run (some weeks may vary):

<b>Course Dates</b>	September 5 - December 19
<b>Teacher On Site</b>	Weekly
<b>Weekly Schedule</b>	<p><b>Monday</b> Unit introduction; review required readings and practice exercises</p> <p><b>Wednesday</b> Teacher on site for in-person help.</p> <p><b>Following Monday</b> Project from the previous unit is due</p>

## Expected Workload

You are expected to work on this class **every day** during the designated time for your school. Plan to spend at least five hours per week in the classroom; some projects may require additional time outside of class.

**Do not try to do all of the work the day before the project is due!!!!** You will not have time to complete them if you “cram”. Also, remember that the teacher may take up to a full day to respond to emails. If you start the project too late in the week and need any help, you probably will not get a response back in time to finish.

**The key to this class is consistency.** Be the tortoise, not the hare. Do a little bit, every day, and you will be successful.

## Weekly Schedule - Tentative

The following table is the schedule for the class. **This is subject to change. Always consult the class website for assignment due dates:**

<b>Sep 5</b>	Course introduction & file management
<b>Sep 10</b>	Your first website

<b>Sep 17</b>	Client / server systems
<b>Sep 24</b>	Online security
<b>Oct 1</b>	Computer number systems, website styling, The Paradox of Choice
<b>Oct 8</b>	Von Neumann architecture and robotics
<b>Oct 15</b>	Tracking and privacy online / MEA Break
<b>Oct 22</b>	Intro to Javascript programming
<b>Oct 29</b>	Javascript conditionals and form validation
<b>Nov 5</b>	Javascript loops and arrays
<b>Nov 12</b>	Algorithms to Live By: The Computer Science of Human Decisions
<b>Nov 19</b>	IT Career Options
<b>Nov 26</b>	IT Education Options / Thanksgiving Break
<b>Dec 3</b>	Copyright Law in IT
<b>Dec 10</b>	IT Entrepreneurship in Minnesota
<b>Dec 17</b>	Introduction to database systems
<b>Dec 24</b>	WINTER BREAK
<b>Dec 31</b>	WINTER BREAK
<b>Jan 7</b>	Data modeling and querying
<b>Jan 14</b>	Big data and visualization

## Grading

Assignments will be scored according to the provided rubric each week. Grade assignments are standard:

<b>A</b>	[100% - 90%)
<b>B</b>	[80% - 90%)

<b>C</b>	[70% - 80%)
<b>D</b>	[60% - 70%)
<b>F</b>	< 60%

## Late Work

All assignments are due on the date posted to the class website. Late assignments are accepted for up to one week with an automatic 10% deduction. **No late work will be accepted after one week** past the due date.

## South Central College Student Policies

Click on the link below to view student policies, including such items as disability rights, student conduct, academic integrity, and privacy statements.

<http://www.southcentral.edu/Student-Academic-Policies/academic-dishonesty-policy.html>

## South Central College Academic Dishonesty Policy

It is important that students are held to standards that uphold concepts of academic honor, integrity, and honesty. That is the best way to ensure that learning can effectively take place in this, or any, course. South Central College has crafted the following policy:

Academic Dishonesty includes misconduct associated with the classroom, laboratory or clinical learning process. Some examples of academic misconduct are *cheating* and *plagiarism*.

*Cheating* includes, but is not limited to

- (a) use of any unauthorized assistance in taking quizzes, tests or examinations;
- (b) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems or carrying out other assignments or
- (c) the acquisition, without permission, of tests or other academic material belonging to a member of the college faculty or staff.

*Plagiarism* is intellectual theft and includes, but is not limited to, the undocumented use of information—paraphrase or direct quotation—from the published or unpublished work of another person or source; plagiarism also includes using papers/writings from an agency engaged in the selling of term papers or other academic materials.

Academic Dishonesty will not be tolerated in this course. For more information about the penalties involved in violation of this policy, please consult the Student Handbook.

## South Central College Accessibility Statement

South Central College strives to make all learning experiences as accessible as possible. If you have a disability and need accommodations for access to this class, contact the Academic Support Center to request and discuss accommodations.

North Mankato: Room B-132, (507) 389-7222; Faribault: Room A-116, (507) 332-5847.

Additional information and forms can be found at [www.southcentral.edu/disability](http://www.southcentral.edu/disability). This material can be made available in alternative formats by contacting the Academic Support Center at 507-389-7222

## South Central College Concurrent Enrollment Program Dates

Student applications and registrations due	5 days from the start of the course
Last date for student to drop from course	15 days from the start of course
Last date for student to withdraw from course	80% of course