

Course Info

Winter 2020 • CRN 21720 • **Saturday** 8:30-11:40pm
14 sessions (Discussion/Lab mix) • TTC Room 2160

Prerequisites: PC literacy is required. Students enrolled in this class should have successfully completed CIS 100 or BUS 103. Others may request the instructor's permission.

Course Description: This course introduces students to the essential programming knowledge for advancing to a programming language course. Learning will include the fundamentals of structured program design, including standard business programming algorithms and documentation practices. It familiarizes the student with the flow of program logic, flowcharting, use of the three necessary control structures of programming, an introductory structured programming language and design methodologies. Concepts such as multiple level accumulation and array processing are included. Minimum benchmarks will be enforced.

Learning Objectives

- Flowchart the logical steps for programming problems incorporating calculations, nested If's/comparisons, record selection, data table / array creation and searches, modifications and elementary read, write and move commands
- Create 3 and 4 level Hierarchy/Structure Charts of modules (subroutines) in a program
- Identify modules and create program flowcharts using structured programming design following the 3 control structures of sequence, selection and iteration
- Follow the Program Development Cycle of Analyze, Design, Code, Test and Documentation
- Appropriately document your program
- Code and execute all programs using a beginning procedural programming language, those without event or object driven processes
 - Visual Studio Visual Basic console programming in this course
- Understand the concepts of Sorting, Sequential and Random File processing

General Education Outcomes

- Effective written and oral communication
- Ability to think critically and to solve problems
- Information, numeric, and technology literacy
- A highly developed sense of ethics
- Strong personal management skills

Textbook: [Starting out with Programming Logic and Design, 5th Edition](#) by Tony Gaddis

Instructor/KVCC Info

Office: 7338

Campus email: jburns@kvcc.edu – (best contact method)

Cell phone (will share if we find that necessary)

Campus phone: 269.488.4113

Voice mail: 269.488.4701 ...extension 6142

Office hours: Saturday – Before or after class (in classroom, if available) OR by appointment

KVCC Public Safety: 269.488.4575 --- located in room 5120 (TTC)

Class Policies

- Cheating/Plagiarism- [Student Handbook \(KVCC PDF\)](#), section: **STUDENT RULES, REGULATIONS AND DISCIPLINARY STANDARDS Page 18-20, Section IV**
- Graded Items
 - Must be turned-in, as scheduled.
 - Prior arrangements may be made - at the discretion of the instructor.
- Hand-in items due as defined in Project document, on schedule, or via class session discussion
 - Occasionally, due dates “may be” modified due to snow day or other closures; however, in general – as an electronic society – turn it in using online tools.

Grading

Attendance	14 sessions	
Project 1-2	50pts each	100pts
Lab 1-3	25pts each	75pts
Quiz 1-2	25pts each	50pts (may have bonus points)
Article Review	25pts	25pts total (current events)
Final Exam	100 pts	Final: 100pts - Comprehensive
	Total	350

	Grade	Points	%	△
Outstanding	4.0	315-350	90-100	35
Excellent	3.5	298-314	85-89	17
Good	3.0	280-297	80-84	17
	2.5	263-279	75-79	17
	2.0	245-262	70-74	17
	1.5	228-244	65-69	17
	1.0	210-227	60-64	17
	0.0	0-209	0-59	

Definitions

4.0... = someone that understands a majority of the subject matter for the course and can apply that knowledge to create a variety of well-written programs. They understand where to go to find additional information and how to weave-in that new knowledge. To an employer, this student is a self-starter and requires little, to no handholding.

3.5... = better than a 3.0 and less than a 4.0

3.0... = someone that understands the subject matter at a level below the 4.0, can apply most of the knowledge to create programs similar to those used within the course, and knows where to find additional information, but struggles at how it fits into their current knowledge. To an employer, this student will require some handholding over the first few months to a year as the student gains additional experience.

2.5... = better than a 2.0 and less than 3.0

2.0... = someone who struggles with the subject matter, fails to apply this knowledge to new programs, yet can work through course example programs if given enough time. This student relies completely on the instructor and course book and has not learned how to use external knowledge sources, nor how to apply that knowledge. The student is one who has had outside influences affecting focus on coursework, procrastinated, or just did not try. To an employer, this student would not be valuable in the subject-matter arena.

0.0, 1.0, or 1.5 ... This student should repeat the course.

Note: If maintaining a higher GPA is important to you - and your ability to do well in the course has been compromised, I highly recommend that you withdraw from the course before the cut-off period. Take the course again, when you are able to focus.

External References

Examples of Programming Logic (YouTube)

- “Concepts...”: <https://www.youtube.com/watch?v=DF2XAc07eI0>
- “MIT Algorithmic Thinking”: <https://www.youtube.com/watch?v=HtSuA80QTyo>
- “TEDx Algorithms”: https://www.youtube.com/watch?v=H_aLU-N0dHM
- “Problem... FlowCharts”: <https://www.youtube.com/watch?v=hN9xemJYwos>

Programming/Development Guidelines

- Microsoft "Naming Guidelines": <https://docs.microsoft.com/en-us/dotnet/standard/design-guidelines/naming-guidelines>
- Microsoft "Working with Base Types": <https://docs.microsoft.com/en-us/dotnet/standard/base-types/>
- Microsoft Search (UX guidelines): <https://social.msdn.microsoft.com/Search/en-US?query=windows%20ux%20guidelines&ac=5>
- Pete Brown: <http://10rem.net/articles/net-naming-conventions-and-programming-standards---best-practices>
- StackOverflow: <http://stackoverflow.com/questions/181597/what-are-the-naming-guidelines-for-asp-net-controls>
- Joel Spolsky: <http://www.joelonsoftware.com/articles/Wrong.html>

See References folder (e.g. Course folder tree), for more

Highly Recommended

- **Code Complete** - [author's site](#), Amazon: [Author's books](#)
- **Don't Make Me Think** - [author's site](#), Amazon: [Author's books](#)
- **Agile Programming** - https://en.wikipedia.org/wiki/Agile_software_development

ZOOM Meeting

Due to the State of Michigan and KVCC actions to limit the spread of COVID-19, a no Face-to-Face instruction policy is in-place until April 6th. This section of the schedule has been added.

The Class will begin using Zoom Online Meeting tool: <https://zoom.us/> -- as of class on Saturday March 21st, I will send out 're-occurring' meeting details for the class.

The class will meet at normally scheduled times – using Zoom. There will be no access to the classroom to meet as a class. The use of the Computer Labs is limited. Hence this falls to you to use a computer with headset (alternately, but not ideal - speakers/mic) from a location other than the college (e.g. home, work, ??) – which should be quiet and free of interruptions.

Primary communications will be heavily email – please check it frequently (e.g. several times a day as we ramp up).

Zoom will be used for the class periods and we can use it to arrange “office hours”
 - aka 1-on-1 time as necessary.

TIPS

- Connect early (I will usually have the meeting started 5-10 minutes early)
- Mute your Mic (important to reduce feedback and unwanted noise)
 - o Some folks believe it helps if you do not mute – as that helps everyone to react – just like in class.
 - o As someone who has been in online meetings – too many background noise issues that may not be controllable. Typing, etc.
- View Comments
- View Participants
- Use Raise your Hand feature or Comments (to all or privately)

Important

- Questions... ask them – this is still a class
- I’m not a radio host – talking into a Mic is going to be quite boring without knowing you are out there
- Plan for show & tell and then lab time where you are ‘heads down’

Class Needs

- Visual Studio (install Community Edition 2019)
- Browser to view Internet content
- KVCC.edu – Files – to fetch and hand-in your work

Class Schedule (subject to change)

March

Date	DOW	To Do	Details/Reference
7	S	Spring Break Week – No Class	
14	S	Normal Class Cancelled – Zoom practice	
21	S	Continue... Tic Tac Toe	Project #2-3
28	S	Continue... Tic Tac Toe	Complete TTT Graded Lab #1

April

4	S	Chapter 9: Sorting, Arrays Sorting (419-445) & Binary Searching (445-451)	Graded Lab #2
11	S	“Recess” – No Class	
18	S	Chapter 15: Windows Forms Forms, properties, events	Graded Lab #3
25	S	Final Exam/TBD	?? Comprehensive

Semester officially ends on Monday April 27th

Class Schedule (subject to change)

January

Date	DOW	To Do	Details/Reference
11	S	Intros, Learning Community Chapter 1: Intro to Computers & Programming Intro to Visual Studio/Visual Basic Flowcharting	
18	S	Chapter 2: Input, Processing and Output Data Types Chapter 3: Modules (Stored Procedures)	#0-Bonus
25	S	Chapter 5/10: Repetition Structures w/Files Ch 5 - Repetition Structures 17 - 266 DO While/ DO Until Loops Ch 10 – Files: 469-508, Sections 10.1, 10.2, 10.4, Skip 490-491 Sec 10.3; Section 10.5 except for 515...	Project #1 handout Quiz #1

February

1	S	Chapter 5 – Accumulators (255-259) Chapter 6 – Functions	
8	S	Chapter 4: Decisions Chapter 7: Validations	Article Review - handout
15	S	Continue...	Quiz #2 Project #2 handout
22	S	Chapter 10: Control Breaks (509)	
29	S	Chapter 5: For Loops Chapter 8: Arrays	

March

Date	DOW	To Do	Details/Reference
7	S	Week – No Class	
14	S	Continue...	
21	S	Chapter 9: Sorting Sorting (419-445) & Binary Searching (446-455)	
28	S	Continue...	Project #3 handout Quiz #3

April

4	S	Continue...	
11	S	“Recess” – No Class	
18	S	Chapter 15: Windows Forms Properties, events	
25	S	College Survey, Final Exam	Comprehensive

Community Time

- College Computer Club – Friday Meetings Fall & Winter
- Other conferences Michigan New Days/Nights, SQL Saturdays

Ethics

Electronic Class Attendance Report (E-CARs) occurs the 3rd week of class. I report participation in class based on active attendance and real effort. Do not ask me to help you commit fraud.

Attendance

I monitor attendance for the college. I do not award points for your attendance. Enhancing your learning... that is the reason you should attend class.

Can you learn without attending class? Some students can; however, your lack of attendance places a high burden on you to learn on-your-own. I have found through personal experience and also proven by students, that less learning takes place when students do not attend class. The amount of knowledge transferred in-class through discussion, demonstrations, and over-the-shoulder guidance is significant.

I do not teach this class via email. Quick discussions are not a replacement for your attendance and participation.

Make the decision to attend and participate in class!

Grading Plan

My goal in this course is that you learn the material.

Projects #1-3 have defined due dates (usually 2 weeks after introduction of project). You must turn in each project by the due date, or take a zero for that project. After my review, if I believe the project can be better, I will give you another week to advance the project.

It doesn't make sense for you to continue to the next objective when you are struggling with a prior objective. However, the college semesters offer us a defined time period to complete the content; therefore, if you have not finished sections of work early in the semester, it does not make sense for you to take the final exam without the knowledge to do so.

Course Book

Some courses have a defined textbook for the course. That textbook is required (as noted near the top of this document).

Other courses have recommended books and/or reading material. While not required, they are recommended and integral to your learning for the course.

Commitment to Learning Community

I enjoy learning. I enjoy the entire atmosphere of learning. The new knowledge, the interactions, and the shared ideas. My goal is to foster a learning community.

You can learn by reading a book and then trial-error your way to a solution. Over time you will likely "get it". However, you will find that when you participate in a learning community... the time to "get it", is significantly less.

A quality work environment is a learning community. Sharing amongst peers can help you reach goals, seek new ideas, or spur new learning & work opportunities.

Each student should seek out learning communities - one which each participant can and will interact with others in the community. It is these interactions and sharing of ideas which will enable the greatest amount of learning to occur.

Support

Many of us may not have learned... *how to learn*. Sometimes the course material really stumps us. What is a struggling student to do? The college offers many resources to help struggling students. Our goal is that you succeed. However, it really is up to the student to seek out assistance.

Be Realistic

1. The sooner the better - most learning is cumulative - you need to know first parts, to continue to later parts
2. Missing (or skipping) classes and then trying to catch up is very frustrating, as you realize how difficult it is to recover lost time

Instructor

Speak with your instructor. Really! I would be glad to help you find what it takes to turn the light bulb on as you learn the course material. If you're not "getting it" in class, then let's arrange a time outside of class, so we can figure it out.

Class Network

Network with your classmates. Successful students work together to learn. Work this network!

Student Success Center

A great place to become familiar with, before you need help. The place to go if you need extensive help. Arrange *one-on-one* tutoring, information about "how-to-study", reading assistance, etc.