Cleveland State University
engagedlearning

Spring 2018 - Tentative Schedule/Syllabus - IST 211 / 600
Fundamentals of Systems Development

	IMPORTANT MESSAGES
	Deadline Last chance to turn in assignments graded "**Resubmit**" is **Thursday, April 5, 2018**. Programming projects must be presented using the format described in the course's syllabus (see the section 'Programing Standards'). Failure to do so will result in a grade of zero points for the assignment.
	Grades, Lecture Notes, Code Samples Click here (PDF) Grades Spring 2018 Click here (PDF) Code Snippets – Summary of C# code discussed in class Click here (PDF) Microsoft Corp. C# Language Specification V3 (*long file*)
	Homework1 - Due: Thu, Feb. 8 Write a C# program that converts an integer representing a distance in inches into its corresponding combination of miles, feet, and inches. The program must allow the user to enter input. Test the program with the values 654321 and 7777.
	Homework2 - Due: Tue. Feb 27 **Problem 3.4.** Design an application using methods that convert an integer number of seconds to an equivalent number of days, hours, minutes, and seconds. Use methods for entering the initial seconds, performing the computations, and displaying the results. Test your program with the following values: 1234567 and 36100 (results should be 14 days 06:56:07 and 10:01:40 respectively)
	Homework3 - Due: Tue. Mar 20 Create a class representing a **medical patient**. Include characteristics such as patient number, first and last name, age, and sex. • Write at least two constructors. • Include properties for each of the data items. • Create a second class that instantiates the first class with information about yourself (as a patient). Add to the second class, a class method that displays your personal data.
	Homework4 - Due: Tue. Apr 10 Prompt the user for the length of three line segments as integers. If the three lines could form a triangle, print the integers and a message indicating they form a triangle. Use a state-controlled loop to allow users to enter as many different combinations as they want. **HINT**: Three sides can make a triangle if the sum of any two sides is greater than the third side. For instance, the sides {3, 4, 5} can make a triangle. However, the group {2, 3, 10} is not a valid triangle combination.
	Homework5 - Due: Tue. May 1 **TBA**
	Exam 1 – Tue, Feb 13 **Exam 2 – Tue, Mar 27** **Exam 3 – Tue, May 8 (Final Exam)**

Cleveland State University

IST 211 / IST 600
Fundamentals of Systems Development (4-0-4)
Department of Information Systems
Monte Ahuja College of Business Administration

Prerequisites:	IST 203
Instructor:	Dr. Victor Matos
Office Location:	BU-342
Office Hours:	Tue. & Thu. 10:00-12:00A – 6:00-7:00P (or by appointment)
Phone:	216 687-3911
Email:	v.matos@csuohio.edu [Preferred]
Webpage:	http://grail.cba.csuohio.edu/~matos
Class Location/Time:	LB-0242 Tue. & Thu. 4:00 PM – 5:50 PM
Class Nbr:	4909

Course Description: (*Prerequisite: IST 203*) Introduces the fundamental concepts of object-oriented programming using a contemporary OO language. Topics include classes and objects, primitive data types, control structures, methods, arrays, and strings; the mechanics of running, testing, and debugging programs; definition and use of user-defined classes.

Key Concepts: Introduction to computing and programming, data types and expressions, methods and behaviors, creating your own classes, making decisions, repeating instructions, arrays, debugging and testing.

Expected Outcomes: At the end of this course, a successful student will be able to:

- Understand the history of computers and programming languages including the evolution of C# and .NET
- Gain an understanding of how types, classes, and objects are related
- Write statements that call methods and to write their own class methods
- Learn to create classes
- Understand control structures that alter the sequential flow of execution
- Describe how to declare and perform compile-time initialization of array elements
- Understand multidimensional arrays and other collection classes, including stacks, queues, and hash tables
- Understand the mechanism of debugging and testing.

Text: C# Programming From Problem Analysis to Program Design; Barbara Doyle, 5th Edition (2016). Published by Cengage Learning. ISBN10: 1-285-85687-2ISBN13: 978-1-285-85687-2

Publisher's Link:
http://www.cengage.com/c/c-programming-from-problem-analysis-to-program-design-5e-doyle/9781285856872

Video Reference
Bob Tabor – Microsoft Virtual Academy. C# for Absolute Beginners [Internet] Cited July 26, 2017.
https://mva.microsoft.com/en-US/training-courses/c-fundamentals-for-absolute-beginners-16169?l=Lvld4EQIC_2706218949

Course Type: Lecture/discussion and programming, assignments.

Collaboration Rule: You may consult your classmates on general issues about the assignment, but your code remains private. You should neither show another your program nor permit another to look at your program. Beyond that, you should adopt an "*empty hands*" attitude toward collaboration: talk about the project as you wish, but leave the conversation with nothing written. You expect that submission will be screened for code-sharing by an automated service. It is your responsibility to keep your source code protected and not readable by others.

Exam Make-up Policy: Make-up exams can be arranged if the student has a proper reason for missing the exam and has notified the instructor before the exam has been given to the class or as soon as possible after the exam in the class of an emergency. Student must provide supporting evidence or documents (e.g., doctor's note).

Grading: The course grade is based on a student's overall performance through the entire Semester. The final grade is distributed among the following components:

Programming Assignments	25%	(Approx. 5 assignments - *Completion is required for obtaining a passing grade*)
Term Examination	75%	(three exams – same value each)

A	93 +	**A**: Outstanding (student's performance is genuinely excellent)
A-	90 - 92	
B+	88 - 89	
B	82 - 87	**B:** Very Good (student's performance is clearly commendable but not necessarily outstanding)
B-	80 - 81	
C	75 - 79	**C**: Good (student's performance meets every course requirement and is acceptable; not distinguished)
D	65 - 74	**D**: Below Average (student's performance fails to meet course objectives and standards)
F	< 65	**F**: Failure (student's performance is unacceptable)

Assignments: All lab assignments *are due at the beginning of class* on the date specified. *Assignments cannot be submitted through e-mail*. Laboratory Assignments handed in after the class has begun will be accepted with a 50% grade penalty for a period of ONE week and then not accepted at all. All laboratory assignments must be completed. Failure to do so will lower your course grade one additional letter grade.

Student Conduct: Students are expected to do their own work. Academic misconduct, student misconduct, cheating and plagiarism will not be tolerated. Violations will be subject to disciplinary action as specified in the CSU Student Conduct Code. A copy can be obtained at: https://www.csuohio.edu/sites/default/files/StudentCodeOfConduct.pdf or by contacting the Judicial Affairs Officer in the Department of Student Life (MC 106). For more information, consult the following web page *CSU Judicial Affairs* available at https://www.csuohio.edu/studentlife/judicial-affairs

Homework Policy: The students are expected to attend all classes. The students are responsible for collecting the notes, handouts and any other course material distributed during the class period. All assignments must be individually and independently completed and must represent the effort of the student turning in the assignment. Should two or more students turn in *substantially the same solution* or output, in the judgment of the instructor, the solution will be considered group effort. All involved in group effort homework will receive a zero grade for that assignment. A student turning in a group effort assignment more than once will automatically receive an "F" grade for the course.

Examination Policy: Students are allowed to bring to the tests a summary page (standard letter size) with their own notes. During the exams: (1) the use of books, cell phones, calculators, or any electronic devices is prohibited, and (2) students must not share any materials.

Make-Up Exam Policy: No makeup exams will be given unless notified and agreed to in advance. Requests will be considered only in case of exceptional demonstrated need.

Tentative Course Schedule: Every effort will be made to follow the published schedule, but topics covered and their sequence may vary depending upon the progress made. You are expected to read the topics for discussion prior to the class.

Week	Chapter – Topic
1-2	1. Introduction to Computing and Programming.
3-4	2. Data Types and Expressions. 3. Methods and Behaviors. **Exam 1 (Tue. Feb 13)**
5-6	4. Creating Your Own Classes.
7-8	5. Making Decisions. **Exam 2 (Tue. Mar 26)**
9-11	6. Repeating Instructions.
11-12	Problem Solving Sessions
13-14	7. Arrays.
15-16 17	8. Advanced Collections. **Exam 3 (Tue. May 8)**

Method of Instruction
This course will use (a) traditional lectures based on recitation of the material, (b) live presentation of the software in the classroom, and (b) directed tutorials. During those supervised tutorials students will implement small pieces of code related to the topics discussed in class. Students are encouraged to actively participate in the class discussions. *Please bring your portable computer*. Students may be asked to make a class presentation of their computer projects. Your instructor will try to reduce the amount of documents handed to you on paper; important messages, lecture notes, assignments, examples of previous coursework, code samples, etc., will be posted on the course webpage.

What is expected of you and I
- Class participation and regular attendance is expected.
- Students are responsible for bringing themselves up-to-date on class material, evaluation schedule and assignments.
- All students are expected to read the assigned chapters before attending classes.
- Exams will be a combination of material presented in lectures, covered in the textbook and additional notes, homework problems, and lab experiences.
- Homework and lab assignments should be completed and returned in operational form.
- If I have to cancel a class, I will try to place a message on the course web page as early as possible.
- I will make efforts in recuperating any lost time
- All grading mistakes must be corrected no later than a week after receiving your graded papers.

Official Calendar: Please consult the page http://www.csuohio.edu/enrollmentservices/registrar/calendar/index.html

Class Meeting Time	Final Exam Day	Time
4:00 – 5:50 Tue. & Thu. (LB242)	Tue. May 8th .	4:00 – 6:00PM

List of Assignments: *Assignments will be announced in class and posted on the course's web-site.*

Programming Standards: Every program must include your name, CSU ID number, the words 'Homework # ...', and a brief description of the assignment. Failure to do this will impact your grade. The report must include all of your source code and corresponding screen-shots illustrating the app's functionally. A sample homework report is shown in the appendix.
Recommendations

- Every variable should have a meaningful name (this includes function/procedure/method names. For instance a variable named X is less meaningful that one called *monthlyInterestRate*).
- Every portion of the program should be as cohesive (single purposed) as possible. This leads to a large number of small methods.
- Non-obvious code within a function should be explained.
- Code should not be over-commented.

Apply the following procedure (Window's users).

1. Add a 'header' including the entries: Author, Date, and Goal. *Goal* explains what the program does, not how it works.
2. Every method (including the main function) should be preceded by a brief comment indicating its arguments and a description of the transformation that it performs.
3. Copy -and-Paste each class into an MS-Word file (use Ctrl-A, Ctrl-C, Ctrl-V). Begin with the portion containing the Main class.
4. Add a line indicating the class' name. Highlight the line with a background color.
5. Repeat steps 1 and 2 until all classes are included in the Word document.
6. Use the Window's Snipping Tool (look into the Accessory folder) to select the portion of your app's Console input/output. Paste the image(s) into the Word file.
7. Print the report; turn it in at the beginning of the class on the due date.

ADA Adherence: If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible. My office location and hours are listed on top of this syllabus. If you need further information, please contact the Office of Disability Services (Main Classroom 147), phone number 216.687.2015, on the web at http://www.csuohio.edu/offices/disability/

Software*:* Microsoft Visual Studio Community Edition (this version is non expiry and free of charge)
Download link: https://www.visualstudio.com/en-us/downloads/download-visual-studio-vs.aspx

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Keyboard Shortcuts

Windows	https://code.visualstudio.com/shortcuts/keyboard-shortcuts-windows.pdf
Mac OS	https://code.visualstudio.com/shortcuts/keyboard-shortcuts-macos.pdf
Linux	https://code.visualstudio.com/shortcuts/keyboard-shortcuts-linux.pdf

TUTORS - Spring 2018 Lab Schedule					
	Monday	Tuesday	Wednesday	Thursday	Friday
Prasanna	OFF	9:00 am - 5:00 pm	OFF	9:00 am - 5:00 pm	2:30 pm - 6:00 pm
Nisarg	9:00 am - 5:00 pm	OFF	9:00 am - 5:00 pm	OFF	9:00 am - 2:00 pm

	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 - 10:00 am	Nisarg	Prasanna	Nisarg	Prasanna	Nisarg
10:00 - 11:00 am	Nisarg	Prasanna	Nisarg	Prasanna	Nisarg
11:00 am - 12:00 pm	Nisarg	Prasanna	Nisarg	Prasanna	Nisarg
12:00 - 1:00 pm	Nisarg	Prasanna	Nisarg	Prasanna	Nisarg
1:00 - 2:00 pm	Nisarg	Prasanna	Nisarg	Prasanna	Nisarg
2:00 - 3:00 pm	Nisarg	Prasanna	Nisarg	Prasanna	Prasanna (2:30 pm)
3:00 - 4:00 pm	Nisarg	Prasanna	Nisarg	Prasanna	Prasanna
4:00 - 5:00 pm	Nisarg	Prasanna	Nisarg	Prasanna	Prasanna
5:00 - 6:00 pm					Prasanna
6:00 - 7:00 pm					
7:00 - 8:00 pm					

Common C# Shortcuts – MS Visual Studio IDE

FORMAT:	**Ctrl + EF**
FULL-SCREEN	**Shift + Alt + Enter**
COMMENTS	**Ctrl + KC**
SURROUND	**Ctrl + KS**
WRITELINE	**cw Tab Tab**
OVERRIDE	**ov TAB SPACE**
CONSTRUCT.	**ctor cw propf**

C# Statements – Programming Guide

Link visited Jan 13, 2016. https://msdn.microsoft.com/en-us/library/ms173143.aspx

Formatting Types in .NET

Last visited: Feb 22, 2018. https://docs.microsoft.com/en-us/dotnet/standard/base-types/formatting-types

Professional Support Groups

StackOverflow Visited on Jan 13, 2016. Link http://stackoverflow.com/

Microsoft C# FAQs Visited Jan 13, 2016. Link http://blogs.msdn.com/b/csharpfaq/

Microsoft Virtual Academy – Online Learning Resources (C#, Web Dev, etc.) Visited March 7, 2018.

https://click.email.microsoftemail.com/?qs=134b14139a3afb1181ca7ce6c6ffa66640b908d30667e92436ecc6177539f8174edcfa18729cd20fa60d97bff839e8abad9c0ce4c9eab6c1

Appendix. Sample of a typical homework layout.

Program.cs Class

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace CSapp1

{
    // AUTHOR: Maria Macarena  - CSU ID: 1234567 - Homework #1
    // DATE:   Sep-15-2018
    // GOAL:   Printing a greeting message on the screen
    class Program
    {
        // The Main method uses the Console class to print a line of text
        static void Main( string[] args )
        {
        Console.WriteLine("Hola Mundo");
        Console.ReadKey();

        }
    }
}
```

Console