



# Administrative

Lecture 1 Administrative

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# Instructor

- Name: Arsalan Rahman Mirza
  - Born date: 1985
- Education:
  - Bachelor of Software Engineering (Hardware branch)
    - Salahaddin University - 2008
  - Master of Software Engineering
    - Near East University - 2015
  - Ph.D. Student in Intelligent Systems
    - Soran University - 2021
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# Objectives of the course

- Upon successful completion of the course, students will develop:
  - Design methods in C# classes
  - Create arrays and collections in C# to store and access data of the same type
  - Understanding the concepts of OOP
    - Classes, objects, inheritance, polymorphism, operator overloading, function template, etc.
  - Work with files as input and output of C# programs, and demonstrate how to create and change files
  - Final goal: Design programs and projects by using OOP concepts.

# Syllabus

- Review fundamentals of programming
  - Data types, conditional statements, loops, strings, arrays
- Functions and Methods
- Basic concepts of OOPs
  - Classes and objects
- Constructors and destructors
- References and dynamic allocations
- Introduction to GUI programming
- Inheritance
- Operator overloading [Second Semester]
- Virtual functions and polymorphism
- Templates and exceptions
- Abstract classes and interfaces
- File I/O
- Iterative Solutions

# References

- C# 8.0 and .NET Core 3.0 – Modern Cross-Platform Development Fourth Edition
- C#, How to Program-Deitel
- C#, The Complete Reference - Herbert Schildt
- An Introduction to Object Oriented Programming with C# (Kieran Mulchrone)
- Introduction to Object-Oriented Programming Using Visual C# Express Edition
- Object Oriented Programming using C# (Kendal)

# Software

- Visual studio 2012
- You can borrow the DVD of the software from me and installed on your own computer
- If you do not have your own computer, the computer labs on campus have the software.

# Top 10 Most Popular Programming Languages

- 1. Python 19,000 Average annual salaries: \$120,000
- 2. JavaScript Number of jobs: 24,000 Average annual salary: \$118,000
- 3. Java Number of jobs: 29,000 Average annual salary: \$104,000
- 4. C# Number of jobs: 18,000 Average annual salary: \$97,000
- 5. C Number of jobs: 8,000 Average annual salary: \$97,000
- 6. C++ Number of jobs: 9,000 Average annual salary: \$97,000
- 7. Go Number of jobs: 1,700 Average annual salary: \$93,000
- 8. R Number of jobs: 1,500 Average annual salary: \$93,000
- 9. Swift Number of jobs: 1,800 Average annual salary: \$93,000
- 10. PHP Number of jobs: 7,000 Average annual salary: \$81,000

# Course Prerequisites

- Prerequisites:
  - Introduction to programming
- Who should be taking this course:
  - students who want to switch to a computer science major
  - students who are just interested in programming.
- Who should NOT be taking this course
  - Students trying to get out of taking a math requirement. This class may be more difficult than the math you are trying to avoid.



# What the class is really about

- There are two main goals of this course:
- Basics of C#
- Core Concepts of Programming Languages
- Concepts of Object Oriented Programming
- Plus - Learn the Principles of Software Development

# Evaluation & Grading

Midterm Exam		Activities				Mark	Final Exam		Total Mark
Theory	Practical	Quizzes, Seminar	Homework, Reports	Project	Presentation	60%	Theory	Practical	100%
10%	10%	10	10	10	10		20%	20%	
20%		40%					40%		

- Homework takes a lot of time, so start them early
- **Back up your work.** Computer crashes or lost programs are not valid excuses for not handing in an assignment.
- Late delivery of homework policy
  - 10% reduction for each day late
  - For your Project you must register your project, implement it and then present.

# Cheating

- Discussing homework concepts is fine, but you must submit your own work.
- If you are caught cheating, 100% you will get 0 Academic Misconduct :
  - Running out of time and using someone else's output
  - Borrowing code from someone who took the course before or has done the project
  - Cheating in exams and assignments
  - Etc.

# In the class

- In an effort to make this class enjoyable for everybody...
  - Please be on time for class!
  - Please do not talk to your friends and neighbors in class! It disturbs everyone and makes it hard to concentrate. If you have a question, just ask me!
  - Please turn your cell phones off!
  - Instructor will manage the time (don't tell me times up)
  - Always I am available.

ANY  
QUESTIONS?

