LEE WILKINS (THEY/THEM)

OFFICE : TBA, CONTACT : MIO

TODAY'S TOPICS:

WELCOME!

COURSE OVERVIEW

360-420-DW
INTRODUCTION TO COMPUTER PROGRAMMING IN ENGINEERING AND SCIENCE

- **Lee** (they/them)
- I have a background in technical artwork production, helping artists make their ideas into real life!
- I've also worked in industry as a programmer
- I've been teaching programming 2012 at many universities and colleges around Canada

ABOUT ME!

WHO ARE YOU?

- NAME
- HAVE YOU PROGRAMMED BEFORE?
- YOUR FAVOURITE BREAKFAST FOOD

COURSE INFORMATION

CLASS SCHEDULE

COURSE EVALUATION

LECTURE 1.1
COURSE INTRODUCTION

CLASSES

THEORY (2 X 1.15 MIN)

LABS (2 HOURS)

TUESDAY / WEDNESDAY / FRIDAY

PYTHON

GENERAL PURPOSE PROGRAMMING LANGUAGE

DATA-SCIENCE USING PYTHON

THE COURSE

In this course you will learn to:

- write programs that encompass building blocks (sequential, selection, and repetitive control structures) used in program construction.
- analyze problems, and then design and implement both numerical and non-numerical (searching and sorting) algorithms to solve the problems.
- search libraries in order to take advantage of code reusability.

EXPECTATIONS

COMPUTER SCIENCE COMPONENT **60%**

TEST 1 (APPROXIMATELY WEEK 6): 15%

TEST 2 (WEEK 10): 15%

THREE ASSIGNMENTS (WEEKS 4, 7 AND 8) : 30%

PHYSICS COMPONENT **40%**

ASSIGNMENTS: 10%

PROJECT 1: SOLVING DIFFERENTIAL EQUATIONS 10%

PROJECT 2: DATA SCIENCE 20%

COMPUTER SCIENCE // PHYSICS

- It is your responsibility to:
  - Upload your graded works- Assignments- to Moodle.
    - Late submission will be penalized (15% day)
    - Very late submission (+3days) wont' be accepted
  - Type (or copy back) your answers in Test1 and Test2 into the Moodle answer template before the exam time expires.
    - No late submission via MIO or over other means will be accepted.

COURSE EVALUATION

1	1/20/2025	M	x
	1/21/2025	Tue	CS Lect 1 - Intro 1
	1/22/2025	Wed	CS Lab 1 - Intro to python
	1/23/2025	Thu	x
	1/24/2025	Fri	CS Lect 2 - Intro 2
2	1/27/2025	M	x
	1/28/2025	Tue	CS Lect 3 - Syntax
	1/29/2025	Wed	CS Lab 2 - Short programs
	1/30/2025	Thu	x
	1/31/2025	Fri	CS Lect 4 - Expressions
3	2/3/2025	M	x
	2/4/2025	Tue	CS Lect 5 - Algorithm
	2/5/2025	Wed	CS Lab 3 - Debugging
	2/6/2025	Thu	x
	2/7/2025	Fri	CS Lect 6 - Syntax
4	2/10/2025	M	x
	2/11/2025	Tue	CS Lect 7 - Statements
	2/12/2025	Wed	CS Lab 4 - Assignment 1 (10%)
	2/13/2025	Thu	x
	2/14/2025	Fri	CS Lect 8 - If
5	2/17/2025	M	x
	2/18/2025	Tue	CS Lect 9 - Loops 1
	2/19/2025	Wed	CS Lab 5 - Loops
	2/20/2025	Thu	x
	2/21/2025	Fri	CS Lect 10 - Loops 2

6	2/24/2025	M	x
	2/25/2025	Tue	CS Lect 11 - Functions 1
	2/26/2025	Wed	P 1 - Projectile - Loops
	2/27/2025	Thu	x
	2/28/2025	Fri	P 2 - Projectile - Loops (2%)
7	3/3/2025	M	x
	3/4/2025	Tue	CS Lect 12 - Review for test 1
	3/5/2025	Wed	CS Lab 6
	3/6/2025	Thu	x
	3/7/2025	Fri	P 3 - Mini proj 1
8	3/10/2025	M	x
	3/11/2025	Tue	CS Lect 13 - Functions 2
	3/12/2025	Wed	CS Lab 7 - Assingment 2 (10%)
	3/13/2025	Thu	x
	3/14/2025	Fri	P 4 - Root finding - Functions
Break	3/17/2025	No class	
	3/18/2025	No class	
	3/19/2025	No class	
	3/20/2025	No class	
	3/21/2025	No class	
9	3/24/2025	M	x
	3/25/2025	Tue	CS Lect 14 - Arrays
	3/26/2025	Wed	P 5 - Optmization 1 - Arrays
	3/27/2025	Thu	x
	3/28/2025	Fri	P 6 - Optimization 2 (2%)

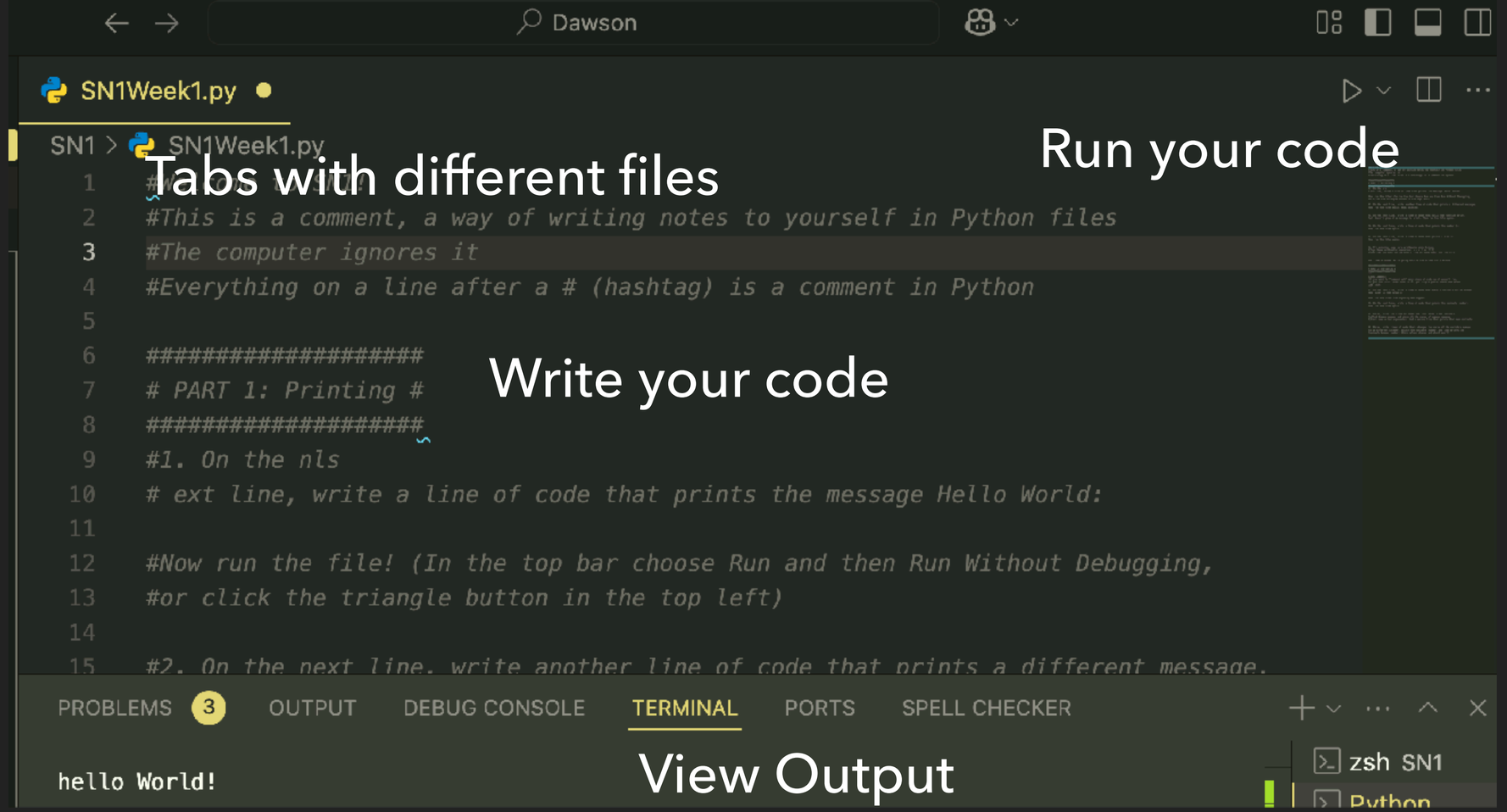
10	3/31/2025	M	x
	4/1/2025	Tue	CS Lect 15 - Collections 1
	4/2/2025	Wed	P7 - Mini proj pt 2
	4/3/2025	Thu	x
	4/4/2025	Fri	CS Lect 16 - Collections 2
11	4/7/2025	M	x
	4/8/2025	Tue	CS Lect 17 - OOP
	4/9/2025	Wed	CS Lab 8 - Assignment 3
	4/10/2025	Thu	x
	4/11/2025	Fri	P 8 - Term proj pt 1 - Question
12	4/14/2025	M	x
	4/15/2025	Friday	CS Lect 18 - Pandas
	4/16/2025	Wed	P 9 - Data Science 1 - Pandas
	4/17/2025		x
	4/18/2025	No class	
13	4/21/2025	No class	
	4/22/2025	Tue	P 10 - Data Science 2 - Pandas
	4/23/2025	Wed	CS Lab 9 - Test 2
	4/24/2025	Thu	x
	4/25/2025	Fri	P 11 - Term proj pt 2 - Code
14	4/28/2025	M	x
	4/29/2025	Tue	P 12 - Data Science 3 - Pandas
	4/30/2025	Wed	P 13 L - Infographics (2%)
	5/1/2025	Thu	x
	5/2/2025	Fri	P 14 - Term proj 3 - Code

15	5/5/2025	M	x
	5/6/2025	Tue	P 15 - SIR model 1
	5/7/2025	Wed	P 16 - SIR model (2%)
	5/8/2025	Thu	x
	5/9/2025	Fri	P 17 L - Term proj
16	5/12/2025	M	x
	5/13/2025	Tue	P 18 - Term proj p

COMPUTER SCIENCE // PHYSICS

- You must go to MOODLE for the course material
  - Lecture PDF slides.
  - Lab assignments
  - Lab exercises and tutorials
  - Test 1 and Test 2 (on Moodle online quiz).

GENERAL NOTES



SET UP YOUR COMPUTER