Smith College
Computer Science
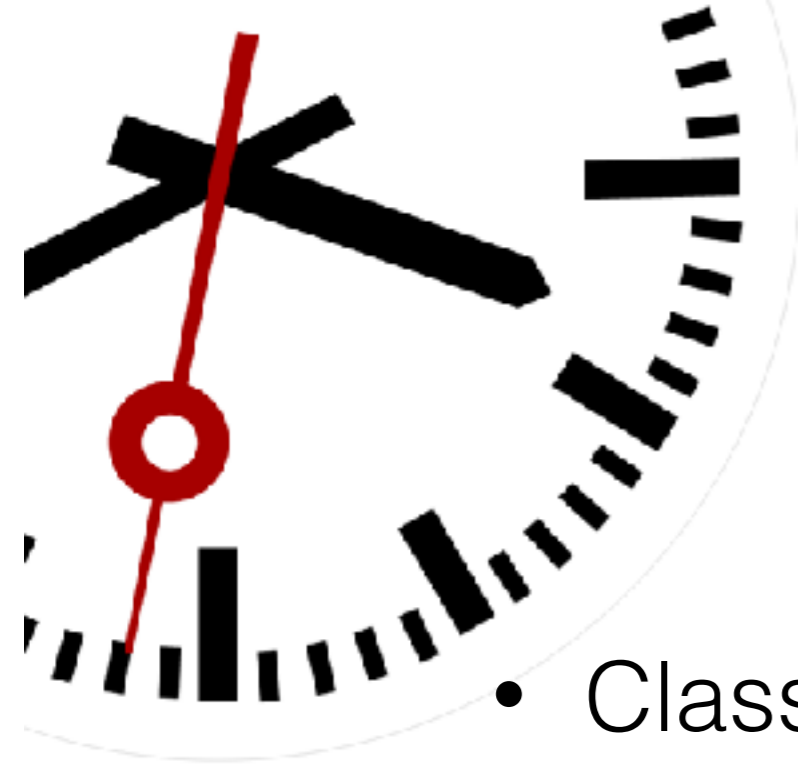
CSC 111
Introduction to
Computer Science

Dominique Thiebaut
Spring 2018

Dominique Thiébaut
dthiebaut@smith.edu

Today:

- Class **Web Page**: https://tinyurl.com/2018-csc111

- **Syllabus**

- **Piazza**

- **Moodle**

- **Python** & **Idle**

Syllabus

- https://tinyurl.com/2018-csc111

- http://cs.smith.edu

  - faculty

    - D. Thiebaut

      - more info

CSC111: Amount of Work
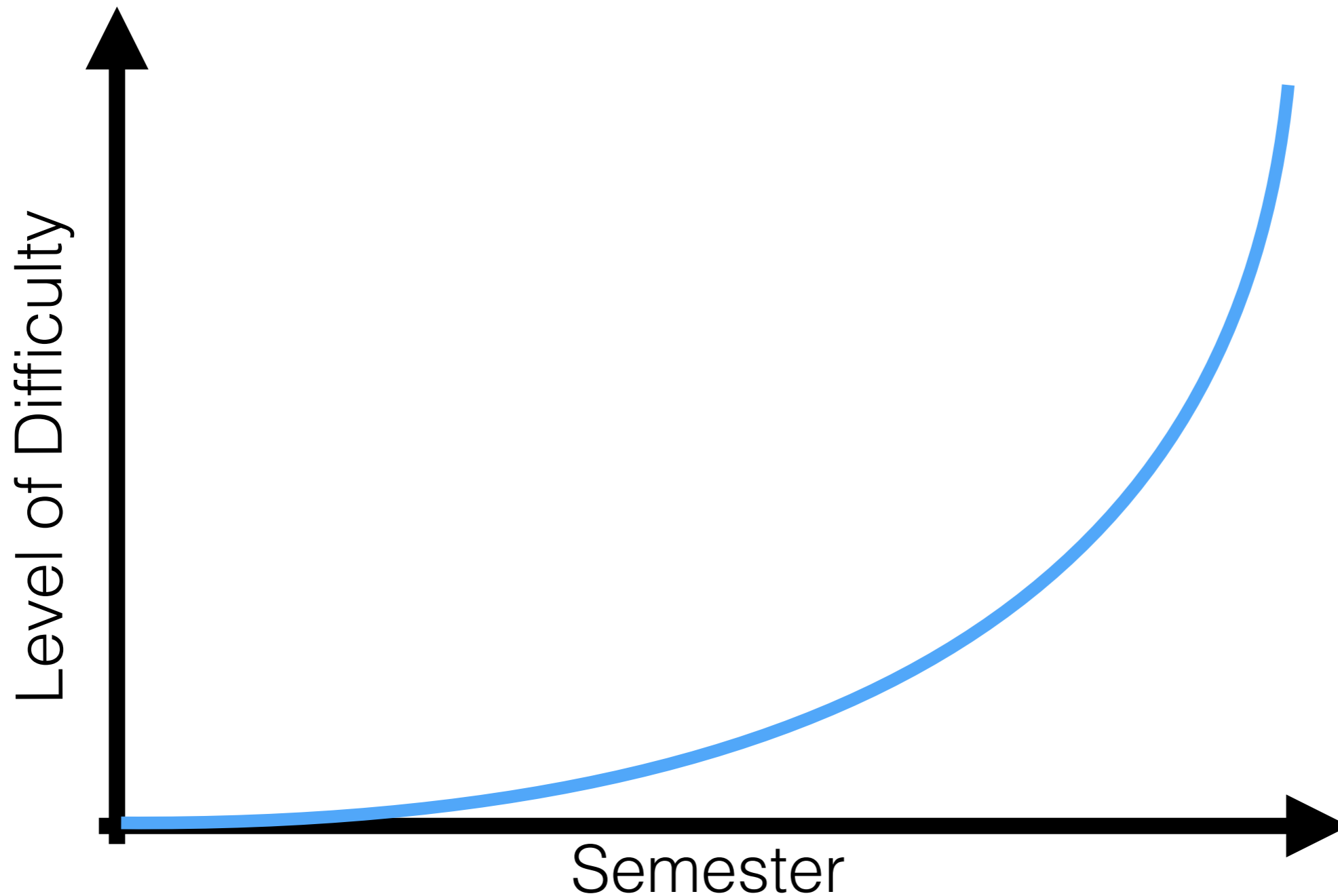
CSC111: Amount of Work

Today + next week…

Level of Difficulty

Your level

Semester
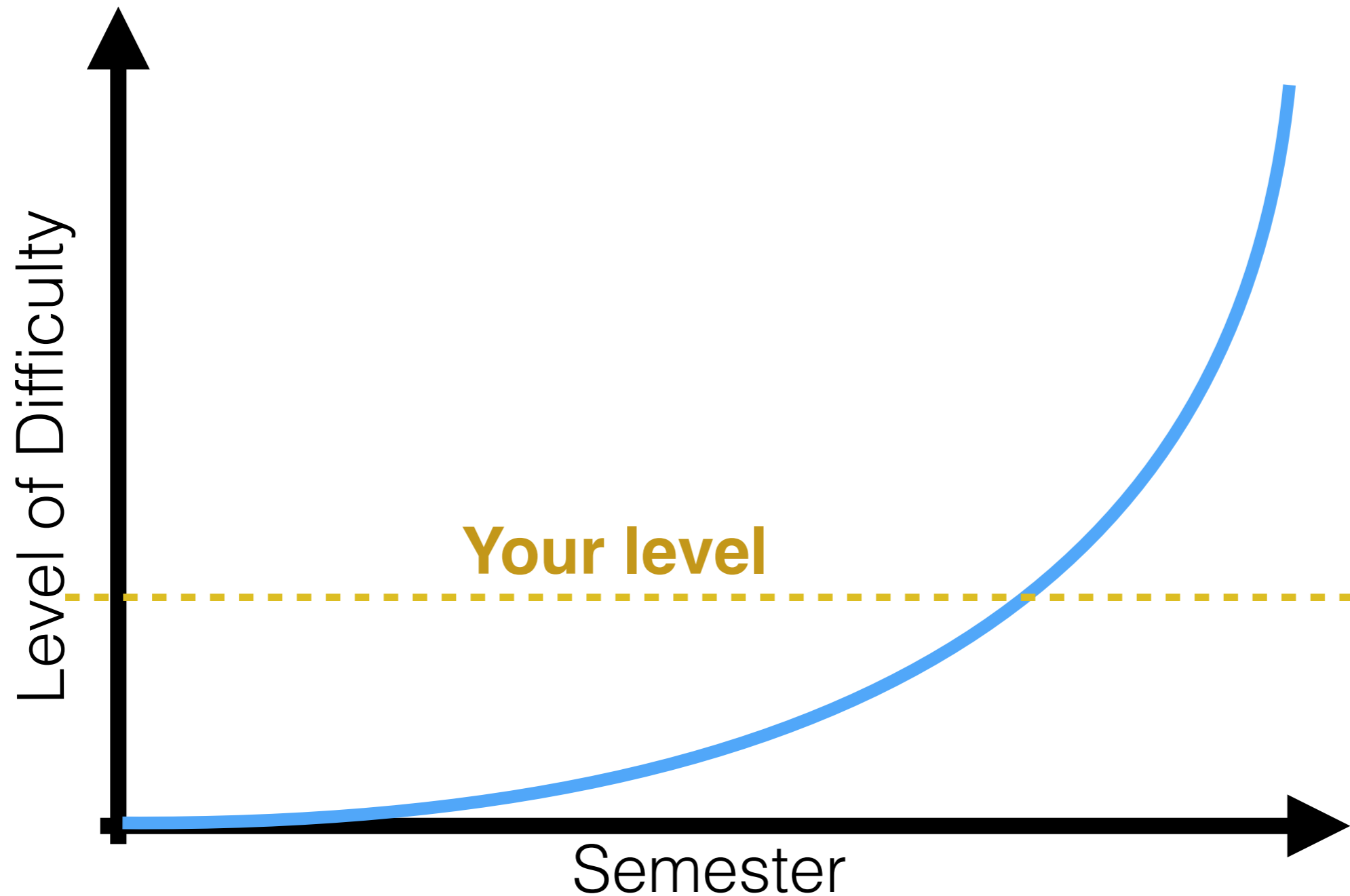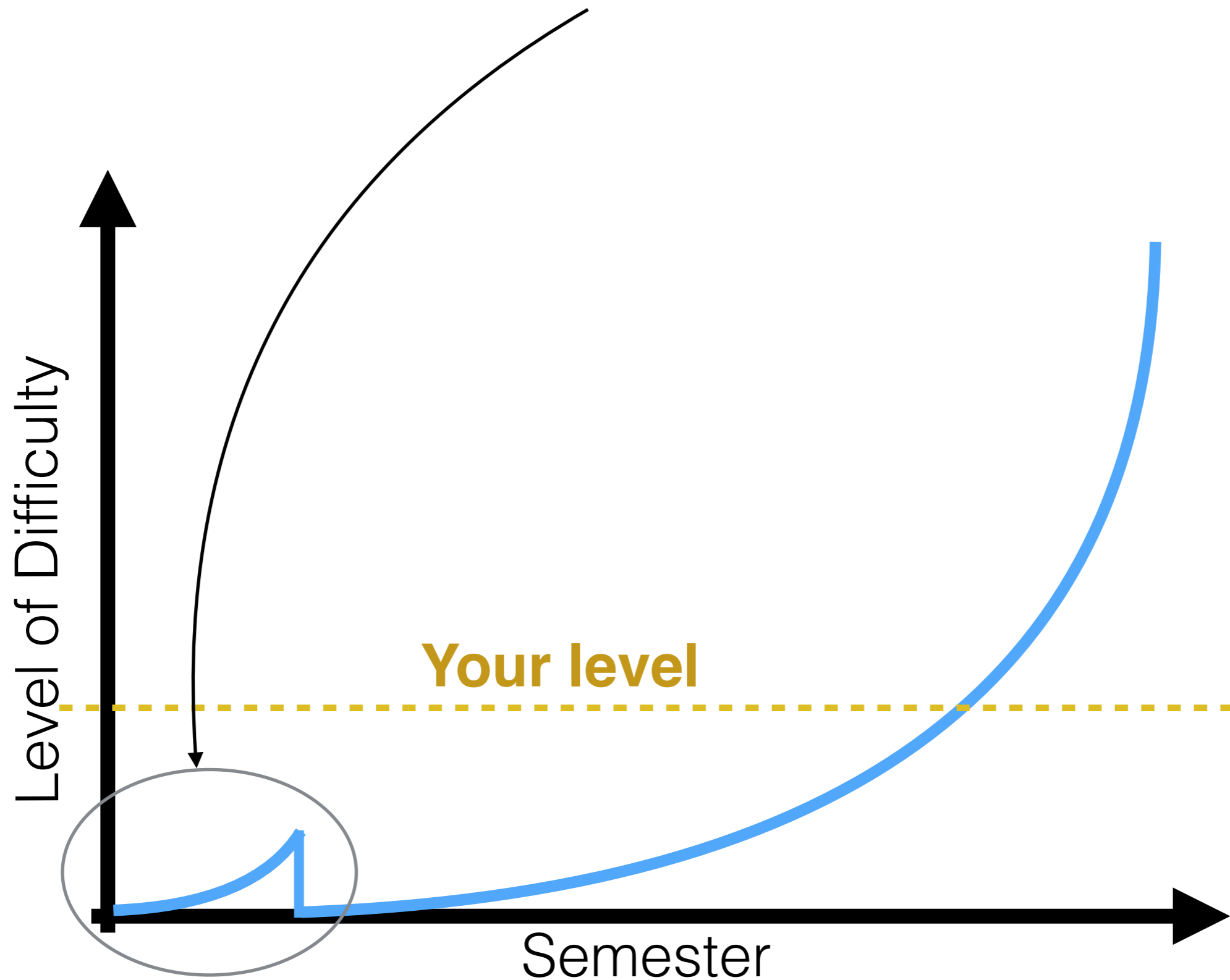
Goals for next Week

- Learn the Rules for **Pair Programming**

- Learn how to use **Idle**

- Write simple programs that use **variables, for-loops,** and that **output** information

- **Install** Python and Idle on laptop (optional)

- Learn how to **submit** Python programs to **Moodle** (lab+homework)

Rule for Laptop Use in Class

- Laptops **welcome** for note-taking, accessing class Web page, and for running Python programs

- All other use is **forbidden**

Reading
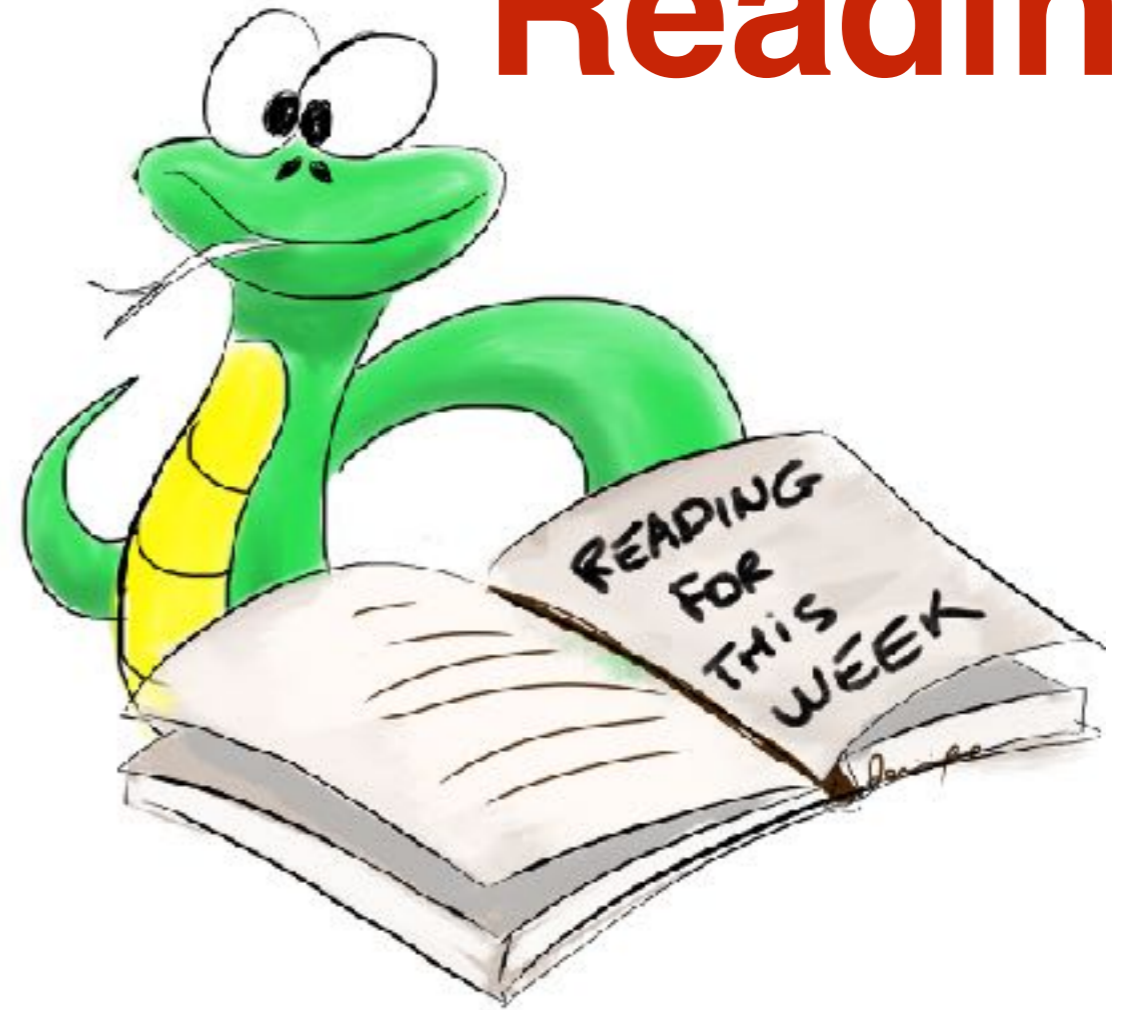
- Read **Chapter 1** in John Zelle's *Python Programming,* up to Section 1.7 included

- Read the article on Pair Programming (see https://tinyurl.com/2018-csc111)

What is a Programming language?

Important Concepts...

- **Syntax and keywords**

  and del from not while as elif global or with assert else if pass yield break except import **print** class exec in raise continue finally is return **def for** lambda try

- **Algorithm**

Rules for Pair Programming

https://youtu.be/fQ-x-T34z9w

An Example Program

```
# A simple program taken from Zelle, Chapter 1
# D. Thiebaut

def main():
    print( "This program illustrates a chaotic function" )
    x = eval( input( "Enter a number between 0 and 1: " ) )
    for i in [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 ]:
        x = 3.9 * x * ( 1 - x )
        print( x )


main()
```

example1.py - /Users/thiebaut/Desktop/Dropbox/111/example1.py

Ln: 12 Col: 0

INDENTATION IS IMPORTANT

COMMENT

DIFFERENT COLORS: SYNTAX HIGHLIGHTING

example1.py - /Users/thiebaut/Desktop/Dro... .py

```python
# A simple program taken from Zelle, Chapter 1
# D. Thiebaut

def main():
    print( "This program illustrates a chaotic function" )
    x = eval( input( "Enter a number between 0 and 1: " ) )
    for i in [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 ]:
        x = 3.9 * x * ( 1 - x )
        print( x )


main()
```

SPECIAL TOOL: EDITOR I D E

Integrated Development Environment = IDLE

Integrated Development Environment

= IDLE

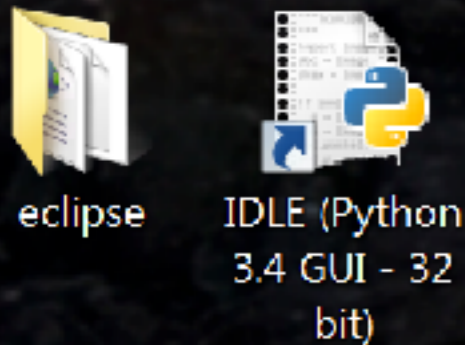**Integrated Development Environment = IDLE**

IDLE

(MAC)

Integrated Development = IDLE
Environment

(Windows)

DEMO TIME!


```python
# A simple program taken from Zelle, Chapter 1
# D. Thiebaut

def main():
    print( "This program illustrates a chaotic function" )
    x = eval( input( "Enter a number between 0 and 1: " ) )
    for i in [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 ]:
        x = 3.9 * x * ( 1 - x )
        print( x )

main()
```

Registration Update

Concepts to Cover in Demo

- **Console** vs. **Edit window**

- *Variables*

  - numbers: **integers** and **floats**

  - text: **strings** of characters

- **print** function

Demo Programs To Play With...

```python
age = 20
year = 2015
yearBorn = year - age

print( "you are", age )
print( "you were born in", yearBorn )
```

```python
name = "Alex"
college = "Smith College"
print( name, "goes to", college )
```

```python
for name in  [ "Lea Jones", "Julie Fleur", "Anu Vias" ]:
    print( name )
    print( "——————" )
```

Demo Programs To Play With… (cont'd)

```
for name in  [ "Lea Jones", "Julie Fleur", "Anu Vias" ]:
      print( name, len( name ) )
```

```
print( "hello" * 4 )
print( "-" * 10 )
greetings = "hello"
dash = "-"
print( greetings * 4 )
print( dash * 10 )
```

```
greetings = "hello"
longGreetings = greeting * 4
print( greetings )
print( longGreetings )
```

Demo Programs To Play With… (cont'd)

```python
for name in  [ "Lea Jones", "Julie Fleur", "Anu Vias" ]:
    bar = len( name ) * "-"
    print( name )
    print( bar )
```

```python
print( "hello" * 4 )
print( "-" * 10 )

greetings = "hello"
dash = "-"
print( greetings * 4 )
print( dash * 10 )
```

```python
greetings = "hello"
longGreetings = greeting * 4
print( greetings )
print( longGreetings )
```