UNM VALENCIA

Title of Course-Section:	**CS 105L-501 (Intro. to Computer Programming)**
Name of Department:	Mathematic, Engineering, & Computer Science
Instructor:	Andisheh Dadashi, Assistant Prof. of Mathematics
E-Mail:	andisheh@unm.edu
Division chair:	Elaine Clark, ewclark@unm.edu
Class Meeting Days/Times:	Remote Arranged: MW 1:30 pm to 2:45 pm
Credit Hours :	3 credit hours
Class Location:	Online (UNM Learn)
Office Location:	Online (UNM Learn)
Office Hours:	Mondays and Wednesdays: 8 am to 10:30 am
	or by appointment

Note: The instructor reserves the right to change the syllabus at any point of time during the semester.

Get to know your instructor:

Andisheh Dadashi earned her bachelor's degrees in Mathematics and Statistics from a ranked university in her native Iran. After finishing her undergraduate degrees, she studied abroad in India where she earned her first Master's degree in Statistics. She later moved to the USA to pursue a Ph.D. in Statistics at the University of New Mexico (UNM) and in 2016, she was offered a faculty position as a visiting Lecturer II at UNM-Gallup after receiving her second Master's degree in Statistics.

Andisheh is a strong advocate of higher education and is following her mother's footsteps who was also a University professor in Iran. Because STEM education is becoming increasingly interdisciplinary, Andisheh sought to complement her background in mathematics and statistics with computer science and is eager to integrate data science into her curriculum. Andisheh is currently working on a Ph.D. in computer science and her research includes astrobiology and biomedical informatics while concurrently teaching mathematics, statistics, and computer programming at UNM-Valencia.

To know **Andisheh** watch this video Click on this link

** Email **

When emailing me, in subject of your email, please write down your course name, number, and section number. For example, the subject of your email to me should be: **CS 105L-501**

You must only contact me with your **UNM e-mail**. Check your **UNM email frequently**. You are responsible for missing any announcement I sent via email or UNM Learn. Failure to identify your message with the class number, and not using your UNM email will result in no response at all.

Table of content

Syllabus quiz

Please, read this Syllabus thoroughly and take the Syllabus quiz on UNM Learn before the due date. Questions will be based on the information in this syllabus.

You have until the end of the first week of classes to finish the quiz. After the due date, quiz will disappear. Syllabus quiz is timed and you have only one trial. Grade of the Syllabus quiz will be part of your overall grade.

Introduction to Computer Programming: The UNM catalog says about CS-105L: "Introduction to Computer Programming is a gentle and fun introduction. Students will use a modern Integrated Development Environment to author small programs in a high level language that do interesting things."

Pre-requisites/Co-requisites: If you are planning on being a CS major and have no previous exposure to computer programming or want a disciplined approach to it, this is the course for you. If you have prior experience, you might want to start with CS152L. If you are a non-CS major, your profession might require some computer programming skills, so this is also the course for you.

In brief: The objective of the course is an understanding of the relationship between computing and problem-solving. We will be using Python to solve engineering and math problems.

Why do you need this course? Almost every person interacts with a computer program several times a day. All professionals are required to have some knowledge of computers as users. Some professions go even further to ask new employees to be able to write computer programs.

At the end of the term, the student should be able to:

1. design computer solutions to simple problems;
2. explain how are computer solutions designed;
3. define basic programming constructs and demonstrate fluency in working with conditional control flow, looping structures, and procedural programming techniques;
4. write programs to solve simple computer problems in a high-level programming language.

The following learning outcomes are also expected:

1. Acquire and be able to define and use precisely some terms of computer programming.
2. Establish the foundations of computer programming as the building block for becoming a "good programmer". There is a set of good practices, habits, skills, related to being a good programmer. Involves characteristics of the product (the program): clear (easy to understand), flexible (easy to modify to make it do something slightly different, or to extend it to add more functionality).
3. Abstract fundamental concepts behind the programming language constructs that will allow the student to learn a new programming language fast, reducing the learning curve of the language. As opposed to strictly learning the syntax and constructs available in a language without discovering what is the abstraction behind it.

The high-level language is Python, the student will learn the basic syntax and rules of Python and will practice it extensively during the term. If you have no previous programming experience, this is the course for you.

Course Outline - Book - Python

Book and Package: Python For Everyone (3rd Edition), Cay S. Horstmann, Rance D. Necaise
ISBN: 978-1-119-49853-7. Wiley.com.
You can purchase a hard copy of your book from UNM-Valencia Bookstore and ask them about the online e-book options.

Why Python?
Python started out as a simple scripting language, but now it's one of the most popular programming languages.
Python is a 'high' level language.
Python is easy to read.
Python is an interpreted language.
All languages have a syntax to learn.
These are the rules by which you write your programs.
We must first learn these rules in order to use Python to solve problems.
Is Free for anyone.
Is mostly cross platform (File management is usually the only issue)
All the tools for python are free.
Python can run on a phone.
More resources to learn and examples than almost any other languages.
If you publish your code using Python then anyone in the world can run it, and probably understand what you are doing.

How to download Python:
Watch the video on installation folder on UNM Learn.

Inclusive Access (IA)

If your course comes with Inclusive Access (IA) you will receive an email that contains instructions for inclusive access to the book via the RedShelf on UNM Learn. Please, read the instructions carefully and follow what is required to have access to the book at a discounted price.

Teaching Materials

Where can you find the materials for this class?
a. You can find the lectures note/ Pdf/ PowerPoint and image in the Notes folder on UNM Learn.
b. On UNM Learn, you can find the lectures I have recorded for coding on Python.
c. Your book will be the best reference to learn the material.

Instructor's Availability on UNM Learn or Via email

- The best way of contacting me will be via message portal on UNM Learn.
- In all cases please, give me 24 hours to 48 hours to reach back to you.
- I will be available via email during the day until 4 pm as long as I am not in the classroom teaching.
- I will not be able to respond to any email on Saturday and Sunday.
- Please be patient and give me 24 hours to 48 hours to reach back to you.

Your final grade in this class is based on the following components:

4 Projects (Weight varies)	70%
Syllabus quiz	1%
Class Participation	29%

Passing grade is 70% or better.

Overall Grades: pluses and minuses may or may not be added to letter grades at the instructor's discretion. Grades of A+ are not rare and will only be awarded for exceptional work.

Grade	From	To	Grade	From	To	Grade	From	To
A+	98	100	B+	88	89.99	C+	78	79.99
A	93	97.99	B	83	87.99	C	70	77.99
A-	90	92.99	B-	80	82.99	D	60	69.99

Where do you find your grade?
In UNM Learn: My grade tab

There are a total of 4 projects for this course. Projects are part of your overall grade. I will assign the Project as early as the semester starts so you can have a look at them. Please dedicate a reasonable amount of time ahead of the due date to be able to prepare what you may need.

You must explain the outcome based on your understanding and not copying others' responses. Any plagiarism count as cheating according to the "Academic dishonesty" section. *"Academic dishonesty"* section.

For each project, you will have almost three weeks starting from the day I begin teaching a topic related to the project. This means as soon as I begin teaching a topic you are assumed to begin working on your project and ask me your questions.

Where do you find the Projects?

I will upload a Jupyter note of your project in the Project folder of UNM Learn. You can download it on a PC or laptop. Then open ANACONDA and Lunch Jupyter notebook. You will find raw cells (or field boxes) that contain the questions followed by empty field boxes for your answers. The instruction for each question will be clear. Projects' outcome MUST be submitted as a Jupyter note and in the appropriate locations that I create for your answers. Please don't change anything on the jupyter file you download, only answer the questions. You must not delete the questions. Also, you must not add or remove the field boxes I have created for you.

When you finish your project and you're ready to submit your project please change the Jupyter note's name.

Jupyter note's name for your project:

The jupyter note name must contain your first name, last name, and project number. For example, if your name is Hehsidna Ihsadad and you're submitting project number 02, the jupyter file name must be HehsidnaIhsadadProject02.ipynb

Note: If your project doesn't have an appropriate name you will receive zero.

Where do you submit the Projects?

After changing the file name please submit it on UNM Learn Project submission portal. You can upload your project as many time as you wish before the due date. I will only review your last attempt.

Due dates:

Have a look at the *"Course Schedule"* for more detail

Due dates are due to the change but we try to stay on top of our schedule. Remember please, all the due times are at 8 am! Due dates are very important. After the due date, no project is accepted to be fair to all the students who work very hard.

Participation points: In each video I will ask you few questions randomly. There can be one, or more questions in each video. You're responsible to watch the entire video and answer the questions by the due dates. Create a word document and answer all the questions in a very organized order based on the video's number

Where to submit the participation points: Submit participation points file with an appropriate name as explained for the project (either pdf or word document).
Submit the word document or pdf to me on UNM Learn participation point submission portal.

Due date: Due dates will be announced in the announcement page. Due dates are due to the change but we try to stay on top of our schedule. Remember please, all the due times are at 8 am!
Due dates are very important. After the due date, no assignment is accepted to be fair to all the students who work very hard.

How to be successful in this class

Programming classes tend to be hard. There are a few reasons for this:
Programming is a different way of thinking, which some people find hard.
Students tend to under estimate the time it takes to write and run programs.
This usually has to do with an error, or bug.
Students overload their class schedule.

What to do:
Start early, the more time you give yourself to develop, write and test your program increases the amount of time you have to:
Get help from Myself or find a good resource online or if you are stubborn (quite like myself) spend time to figure the bug/error out and fix it.
Come to class!
The first few assignments will be easy, and you will naturally think that the final project can be done in an hour. Don't make that assumption!
Start your Projects and assignments early.

What not to do:
Starting the homework and projects late.
Skipping a lecture. Note: There are participation points given through iClicker in lecture will have something due every week.
Not reading before class. Note: There are a lot of things to cover, if you read before class you will have a better understanding of the material and will be able to form better questions.
Not reading after class because you didn't read before class.

Support!

If you have a documented disability, the Equal Access Services office will provide me with a letter outlining your accommodations. I will then discuss the accommodations with you to determine the best learning environment. If you feel that you need accommodations, but have not documented your disability, please contact Cheryl Dilger, the coordinator for Equal Access Services at 925-8910 or cdilger@unm.edu.

If you are struggling in this course, do not be afraid to ask for help!

• Office Hours: See my office hours listed at the beginning of this syllabus."Office Hours" Feel free to come by or log in for online office hours, or make an appointment to get help.

• Form study groups: You may work together with other members of our class on UNM Learn.

• Free Tutoring: (to be announced) The Math Center at Valencia campus has free tutoring and open labs. Call 505-925-8907 for more information. "LRC"

• Student Services: There are various services provided in our Student Services Department. Read about "ARC" equal access Services. Also, we have a testing center, advising, and career placement available: Valencia Student Services

StudentBehavior & CollegialBehavior

According to the Code of Conduct as stated in the Policies and Regulations for UNM, student activities that interfere with the rights of others to pursue their education or to conduct their University duties and responsibilities will lead to disciplinary action.

This includes any activities that are disruptive to the class and any acts of academic dishonesty. Students are expected to behave in a courteous and respectful manner toward the instructor and their fellow students. Students may be dropped from a class for inappropriate behavior. For more information: Click Here!

Since we assume you are all adults, we will expect from you, respectful adult behavior. Engaging in disruptive or unruly behavior could result in your being asked to leave, at which time you will be counted absent and a referral will be sent to the Associate Dean of Student Services. Continuing to behave in this way could result in your being dropped from the course. Disruptive or unruly behavior includes but is not limited to:

• texting or talking on your cell phone or Laptop at any time during class,

• continually talking with your neighbor when we are not working on a group activity,

• working on homework from another class,

• reading material or watching media on a mobile device not related to this course or at a time that is inappropriate,

• refusing to participate in the class activities.

Academic Dishonesty

Having academic integrity is paramount to your success in any class. Plagiarism or cheating is not tolerated. Any instance of this will result in a grade of zero for that assignment. Here is the link to the UNM Academic Dishonesty Policy: Click Here!

The policy states: Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or who otherwise fails to meet the expected standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

Academic Dishonesty is defined as:

"Academic dishonesty" includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

Cheating students will be prosecuted according to University guidelines. Students should get acquainted with their rights and responsibilities as explained in the Student Code of Conduct Click Here!

UNM Valencia Title IX Representative

Title IX (9) Statement: In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered "responsible employees" by the Department of Education (see pg. 15 - http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the Office of Equal Opportunity (oeo.unm.edu). For more information on the campus policy regarding sexual misconduct, see: Click Here!

Your Responsibility

EXPECTATIONS: Students are expected to conduct themselves in a polite, courteous, professional and collegial manner. Cell phones must be set on silent and be out of sight during class. No food or drink is allowed in the computer labs.

Time for This Course: Plan to spend a minimum of 9 to 12 hours per week for this class. There is no guarantee you will pass if you dedicate this amount of time, you still need to learn the material and use your time wisely, but those who pass generally are the ones who spend the time needed to do the work to learn the material.

You are responsible for all material covered in this Syllabus and in class, in assigned readings, and on homework assignments. Not all material on tests will necessarily be covered in class but will be in the assignments. The use of cell phones, headphones, etc. is not permitted in class or exams.

Disabilities Policy: (ARC)

Contact Equal Access Services at 925-8560 to schedule an appointment.Click Here!

The Center for Academic Learning

The Learning Center is open Monday – Friday with evening hours Monday – Thursday To schedule an appointment or for additional information call (505)-925-8907 Click Here!

UNM Valencia Registrar's Office

Contact Registration Office by calling 925-8580 Click Here!

UNM Deadlines & Academic Calendar

UNM Deadlines: Click Here! .....*And....* **Academic Calendar:**Click Here!

Library

We have a library at UNM-Valencia. You should already know where the library is.

UNM Administrative Mandate on Required Vaccinations: All students, staff, and instructors are required by UNM Administrative Mandate on Required Vaccinations to be fully vaccinated for COVID-19 as soon as possible, but no later than September 30, 2021, and must provide proof of vaccination or of a UNM validated limited exemption or exemption no later than September 30, 2021 to the UNM vaccination verification site. Students seeking medical exemption from the vaccination policy must submit a request to the UNM verification site for review by the UNM Accessibility Resource Center. Students seeking religious exemption from the vaccination policy must submit a request for reasonable accommodation to the UNM verification site for review by the Compliance, Ethics, and Equal Opportunity Office. For further information on the requirement and on limited exemptions and exemptions, see the UNM Administrative Mandate on Required Vaccinations. **UNM Requirement on Masking in Indoor Spaces:**

All students, staff, and instructors are required to wear face masks in indoor classes, labs, studios and meetings on UNM campuses, see masking requirement. Vaccinated and unvaccinated instructors teaching in classrooms must wear a mask when entering and leaving the classroom and when moving around the room. When vaccinated instructors are able to maintain at least six feet of distance, they may choose to remove their mask for the purpose of increased communication during instruction. Instructors who are not vaccinated (because of an approved medical or religious exemption), or who are not vaccinated yet, must wear their masks at all times. Students who do not wear a mask indoors on UNM campuses can expect to be asked to leave the classroom and to be dropped from a class if failure to wear a mask occurs more than once in that class. With the exception of the limited cases described above, students and employees who do not wear a mask in classrooms and other indoor public spaces on UNM campuses are subject to disciplinary actions. Communication on change in modality: The university may direct that classes move to remote delivery at any time to preserve the health and safety of the students, instructor and community. Please check your email and your UNM Learn site regularly for updates about our class, and please check https://bringbackthepack.unm.edu regularly for general UNM updates about COVID-19 and the health of our community.

Acceptable masks and mask wearing in class:

A two-layer mask that covers the nose and mouth and that is cleaned regularly is acceptable, as are disposable medical masks, KN95, KF94, FFP1 and FFP2 masks. A face shield is not sufficient protection. It is vital that you wear your mask correctly, covering your nose and mouth. Removing your mask for an extended period to eat or drink in class violates the university mask requirement and endangers others. Consequences of not wearing a mask properly: If you don't wear a mask, or if you do not wear a mask properly by covering your nose and mouth, you will be asked to leave class. If you fail to wear a mask properly on more than one occasion, you can expect to be dropped from the class. If you insist on remaining in the classroom while not wearing a mask, class will be dismissed for the day to protect others and you will be dropped from the class immediately. The instructor will try to have a few disposable masks available in the classroom on a first-come, first-served basis.

Topics

Topics	In detail.
Programming Basics:	Introduction to problem solving with computers. Intro to Python.
Numbers and strings	Variables, Arithmetic, Number Types, Inputs, Input
Strings	String Type, Concatenation and Repetition, Converting Strings to Numbers, Characters, Methods
Input and Output	User Input, Numerical Input, Formatted output
Arithmetic	Basic Arithmetic operations, Powers, Division and Remainder, Mathematical Functions
Decisions	If Statement, Relational Operators, Nested Branches, Booleans
Loops	While loop, For loop, Nested Loops
Functions	What is a function and why use them, Implementing functions, Parameter Passing, Return values
Lists	Creating, Accessing, Traversing, Operations
Sets	Creating, adding, removing, union, intersection, and difference.

CS 105 Schedule Fall 2021 (subject to change if necessary)		
Week	CS 105 Schedule (Material Covered)	Notes
Aug 23	Installing Python, and Introduction	Videos 00
Aug 30	Basics of coding in Jupyter, Variables, Math operators, reserved words, Boolean & ...	Videos 02 & 03
Sep 06	Strings, indexing, modules, packages, methods & ...	Videos 04 & 05
Sep 13	Dataset, reading & writing CSV & Txt files	Videos 06 & 07
Sep 20	Data processing	Videos 08 & 09

Project 01 is due on Monday Sep 27th at or before 8 am

Sep 27	Visualization, Math and Numpy packages, Strings methods	Videos 10 & 11
Oct 04	String & syntax formatting, Input & output, Dictionaries & lists	CS105-V-11 & V-12
Oct 11	lists & tuples	CS105-V-13 & V-14
Oct 18	Strings and Different number sets	V-Strings & Sets

Project 02 is due on Monday Oct 25th at or before 8 am

Oct 25	If conditional statement	CS105-V-15
Nov 01	elif conditional statement	CS105-V-16 & V-17
Nov 08	While loop	CS105-V-18

Project 03 is due on Monday Nov 15th at or before 8 am

Nov 15	while loop with if condition & complex while loop	CS105-V-19 & V-20
Nov 22	for loop & nested for loop	CS105-V-21 & V-22
Nov 29	Basics of functions	CS105-V-23 & V-24
Dec 06	Complex functions	CS105-V-25

Project 04 is due on Monday Dec 13th at or before 8 am

Dec 13	Final week	