

University of North Florida - School of Computing  
Course Syllabus for  
(Undergraduate – 3 Semester Credits)



# CAP 4784

# Introduction to Data Analytics



## Instructor

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## Syllabus Contents

Instructor Info	... 1
Important Dates	... 1
Course Information	... 2
Reference Books	... 2
Method of Evaluation	... 5
Passing Requirement	... 6
Data Analytics Project	... 8
Symposium	... 9
Python Project	... 9
Class Participation	... 10
Discussion Forum	... 10
Course Schedule	... 12
Other Remarks	... 14

## Important Dates

Team Information: **Week 1**

Group Contract: **Week 2**

Data Analytics Project Deliverable 1 – Proposal: **Week 3**

Course Withdrawal (25% Refund): **Week 5**

Data Analytics Project Deliverable 2 – Data Collection Report: **Week 6**

Data Analytics Project Deliverable 3 – Data Preparation Report: **Week 8**

Individual Python Programming Project: **Week 10**

Data Analytics Project Deliverable 4 – Descriptive Analytics Report: **Week 11**

Course Withdrawal (No Refund): **Week 12**

SoC Symposium Video File: **Week 14**

Data Analytics Project Deliverable 5 – Predictive Analytics Report: **Week 15**

SoC Virtual Symposium: **Week 15**

## Course Information

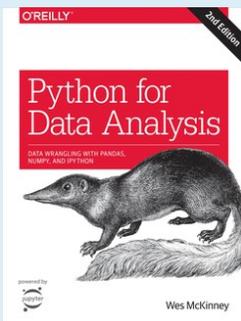
### Catalog Description

This course gives a broad overview of the various aspects of data analytics and visualizations. Students will learn ways of accessing data from various sources such as web APIs and repositories, techniques of cleaning data and organizing data for analysis, using analytical methods to solve real-world problems, and create visualizations to aid the interpretation of analysis results. Students will have hands-on training using relevant programming languages, as well as analytics and visualization tools. Over the course of the semester, students will apply lessons learned and use tools trained to produce interactive, web-based visualization projects.

**Prerequisite:** COP 3703 - Introduction to Databases

### Reference Books

There is no prescribed textbook for this course. Course slide materials, quizzes, practice lab activities, and some of the assignments will be based on the selected chapters from below listed reference books. While most of the course contents are prepared using these books, you should be able to take part in the course activities without having access to the books.



#### **Python for Data Analysis**

Year: 2017

Edition: Second

Author: Wes McKinney

Publisher: O'Reilly Media, Inc.

ISBN: 9781491957660

Amazon Link: <https://www.amazon.com/Python-Data-Analysis-Wrangling-IPython/dp/1491957662>

#### **The Data Science Design Manual**

Year: 2017

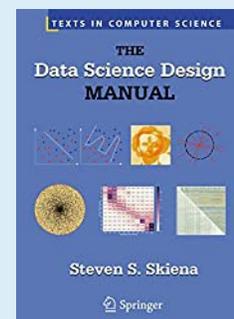
Edition: First

Author: Steven S. Skiena

Publisher: Springer

ISBN: 9783319554433

Amazon Link: <https://www.amazon.com/Science-Design-Manual-Texts-Computer/dp/3319554433>



## **Instructor's Perspective About the Course**

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Harvesting actionable knowledge from data has become a new gold mine. The age of cultivated data is forthcoming, and the time to stake your claims to mine it for insights and prosperity is now. Like you, many are learning data science techniques to join the pathways to become a data scientist. Despite high enrollment and availability of various data science courses, talented data scientists are scarce. Data-driven organizations' primary challenges are acquiring the right data, effectively analyzing data, and extracting actionable insights from data. To address the shortage of talented data scientists and the challenges organizations face, data science courses and curriculum must take an interdisciplinary approach, wherein domain-specific and technical skills are imparted to students.

Data scientists are expected to apply computational and statistical methods to a specific domain. The data scientists are required to have a “practical perspective” where data scientists are seen as business analysts that harvest actionable knowledge from high-dimensional and heterogeneous datasets to create solutions specific to a problem domain; and have a “technical perspective” where data scientists are seen as experts in advanced computational tools, data mining algorithms, statistical analysis, and machine learning. Successful data scientists can use business domain expertise, advanced computing, mathematical foundations, and statistical methods to find valuable insights that they synthesize, create intuitive visuals, and report it in a manner easy to understand by decision-makers.

This introductory to data analytics course is designed to be an entry to the data scientist pathways. In this course, you will receive an overview of the data science discipline, become proficient with Python, learn to perform descriptive and predictive analytics, and work on real-world healthcare datasets. At the end of this course, you should have gained foundational skills of performing data analysis using Python (regards to technical perspective) and gained some experience working with healthcare domain problems (regards to practical perspective). The content and skills learned in this course are introductory. Please consider taking advanced courses such as data mining, machine learning, and artificial intelligence to propel your journey to become a data scientist.

## **Learning Outcomes**

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Upon completion of the course, students should be able to:

1. Understand the elements of the data analytics project lifecycle from business need to solution deployment.
2. Explore and transform datasets using appropriate analytical methods.
3. Write programs to perform data analytics on large, complex, real-world datasets.
4. Apply descriptive and predictive analytics models and methods to generate insights from real-world datasets.

5. Design and create visualizations to represent and communicate the results of data analysis using appropriate techniques and tools.
6. Solve real-world problems with complex datasets by adapting and applying relevant analytical methods.
7. Communicate the results of selected data analytics techniques, models, and methods used to solve real-world problems to non-specialist audiences in written and oral forms.

## **Method of Teaching**

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This course is a highly interactive class that incorporates online teaching methods. This course utilizes various teaching mediums, including video lectures, PowerPoint notes, lab practice activities, individual assignments, team project work, technical project reports, discussion forums, and quizzes. As with all university courses, expect to dedicate a minimum of 9 hours of study per week to this course. It should be noted that successful students typically participate in the online course activities at least 3 to 4 times a week. The nature of online education requires students to be actively involved and take more responsibility for their learning. This distance learning course is asynchronous (students may log on to Canvas at any time to complete coursework). However, students must participate in course activities and submit their work on time by the due date outlined in the course schedule.

## **Student Responsibilities**

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Everyone, especially those new to online courses or Canvas, should review UNF's resources and tips on taking Distance Learning (DL) classes at <https://www.unf.edu/online/current/FAQ.aspx>. If you have technical problems or a question on how to use Canvas, call the Help Desk at 620-HELP or check the web-link above. It is your responsibility to understand how to use Canvas correctly.

Configure your personal computer to navigate correctly and efficiently on Canvas by the end of the first week of class. Use a current, standards-compliant web browser such as Google Chrome or Mozilla Firefox.

## **Computing Resources**

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This course covers the basics of applied data science, analytics, and visualization in Python. Students are responsible for installing Python and an integrated development environment (IDE) on their personal computers. Recommended IDE for CAP 4784 class is Visual Studio Code (<https://code.visualstudio.com/>). Students may use their preferred IDE for developing programs in Python.

Students are encouraged to install Anaconda on their personal computers. Anaconda is a Python distribution containing Python, the conda package, environment manager, and many software

packages for data analytics, data science, and scientific computing. Anaconda can be downloaded from <https://www.anaconda.com/download/>.

Most commercially available computers have plenty of system processing to run Python programs, and the majority of the machine learning models. Students seeking guidance on recommended computer specifications can refer to <https://www.unf.edu/ccec/students/hardware.aspx>.

## Campuswire: Q&A Forum

CAP 4784 will be using Campuswire for managing and responding to questions posed by students. Campuswire is an online discussion forum system with features to manage questions posed by students, the ability for students to message instructors and receive troubleshooting assistance from the instructor and other peers. Students can use Campuswire to ask questions about the course lectures, lab activities, projects, or other course-related questions. Posts can be public or private; public posts are visible to everyone, while private posts are visible only to the course instructor. Questions having to do with your specific solution or grading should be private. If you have a question about something that is very likely helpful for other students, then post it as a public question. The course instructor reserves the right to make private posts public if the answer is of general interest.

Students are encouraged to answer questions posted by other students. Campuswire is designed to support students learning from peers and instructors.

Please note that the Canvas course management system will be used for all other course-related activities, including course announcements, lectures, assignment descriptions, graded discussion activities, and receiving assignment submissions from students.

## Method of Evaluation

Assessment Item	Team Assessment	Individual Assessment
<b>Data Analytics Project</b>		
<b>Deliverable 1 – Proposal</b>	1%	4%
<b>Deliverable 2 – Data Collection Report</b>	5%	5%
<b>Deliverable 3 – Data Preparation Report</b>	5%	5%
<b>Deliverable 4 – Descriptive Analytics Report</b>	5%	10%
<b>Deliverable 5 – Predictive Analytics Report</b>	5%	10%
<b>Project Presentation at Symposium</b>	5%	5%
<b>Python Programming Assignments</b>		

Assessment Item	Team Assessment	Individual Assessment
<b>Lab Assignments</b>		5%
<b>Programming Project</b>		10%
<b>Class Participation</b>		
<b>Quizzes</b>		10%
<b>Discussion Forums</b>		10%
	<b>Sub Total</b>	26%
	<b>Total</b>	100%

Letter grades will be based on:

94 – 100 = A

90 – 93.99 = A-

87 – 89.99 = B+

84 – 86.99 = B

80 – 83.99 = B-

77 – 79.99 = C+

70 – 76.99 = C

60 – 69.99 = D

less than 60=F

The penalty for cheating or plagiarizing on assignments will be F grade in the course. Work that is similar beyond coincidence will automatically be considered cheating by all parties.

### Late Assignments

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There will be a penalty of 10 % per day for late submission of assignments (including weekends and holidays).

## Course Passing Requirement

To pass this course, at minimum 50% of grade points must be obtained for each assessment item. If you received less than 50% grade points for one of the assessment items, then you will receive F as the final letter grade.

### Academic Dishonesty

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UNF will not tolerate academic dishonesty in any form as it is contrary to the process of learning. Students should demonstrate academic integrity in all of their course works. Students who violate

university rules on academic dishonesty will be punished with the most severe penalty allowed by the university policy.

Please review the University policy on academic misconduct at:

[https://www.unf.edu/president/policies\\_regulations/02-AcademicAffairs/EnrollmentServices/2\\_0640P.aspx](https://www.unf.edu/president/policies_regulations/02-AcademicAffairs/EnrollmentServices/2_0640P.aspx)

The policy on academic integrity and misuse of computer equipment and computer accounts found at [http://www.unf.edu/ccec/computing/Policies\\_Guidelines.aspx](http://www.unf.edu/ccec/computing/Policies_Guidelines.aspx)

### Violations of Academic Integrity

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Under this heading the University of North Florida Student Handbook identifies several types of violations; these include but are not limited to: cheating; fabricating and falsifying information or citations; submitting the same work for credit in more than one course; plagiarizing; providing another student with access to one's own work to submit under this person's name or signature; destroying, stealing, or making inaccessible library or other academic resource material; and helping or attempting to help another person commit an act of academic dishonesty. The University of North Florida authorizes any instructor who finds evidence of cheating, plagiarism, or other wrongful behavior that violates the University of North Florida Academic Integrity Code to take appropriate action. Possible action includes, but is not limited to, failing the student on the work in question, failing the student for the course, notifying the appropriate academic dean or Vice President for Student Affairs, and requesting additional action be taken. The consequences of a breach of academic integrity may result in an F, which is unforgivable, regardless of withdrawal status.

### Matching Assessment Items to Learning Outcomes

Learning outcomes	Assessment Items
Understand the elements of the data analytics project lifecycle from business need to solution deployment.	Quizzes, Discussion Forums, Data Analytics Project Reports, and Data Analytics Project Presentation
Explore and transform datasets using appropriate analytical methods.	Lab Assignments, Individual Python Programming Project Data Analytics Project Deliverable 3 – Data Preparation Report, and Deliverable 4 – Descriptive Analytics Report
Write programs to perform data analytics on large, complex, real-world datasets.	Lab Assignments, Individual Python Programming Project, Data Analytics Project Deliverable 2 – Data Collection Report, Deliverable 3 – Data Preparation Report, Deliverable 4 – Descriptive

Learning outcomes	Assessment Items
	Analytics Report, and Deliverable 5 – Predictive Analytics Report
Apply descriptive and predictive analytics models and methods to generate insights from real-world datasets.	Data Analytics Project Deliverable 4 – Descriptive Analytics Report, and Deliverable 5 – Predictive Analytics Report
Design and create visualizations to represent and communicate the results of data analysis using appropriate techniques and tools.	Lab Assignments, Individual Python Programming Project, Data Analytics Project Deliverable 4 – Descriptive Analytics Report, Deliverable 5 – Predictive Analytics Report, and Data Analytics Project Presentation
Solve real-world problems with complex datasets by adapting and applying relevant analytical methods.	Data Analytics Project Reports, and Data Analytics Project Presentation
Communicate the results of selected data analytics techniques, models, and methods used to solve real-world problems to non-specialist audiences in written and oral forms.	Data Analytics Project Reports, and Data Analytics Project Presentation

## Deliverables

### Data Analytics Project

Data analytics project involves the manipulation and computation of heterogeneous data from diverse sources. Manipulation and computation are performed on large volumes of data at high velocity to identify patterns, correlations, and other useful information. Data analytics project utilizes data science methods to draw inferences and make predictions to enable innovation, gain competitive business advantage, and help strategic decision-making.

The goal of the data analytics project is to give students an experience of using data science methods in a practical setting. As a part of this project, students would be expected to find a real-world dataset relevant to the healthcare domain. The project work would involve cleaning the data, preparing the data for analysis, exploring descriptive analytics, performing predictive analytics, writing technical reports, and presenting the findings.

#### Team Experience (Team info due: Week 1)

Data science projects are almost always a collaborative effort. Thus, students would be expected to work as a 4-person team for this project. Submit the team name and member info.

**Group Contract** (Group contract due: Week 2)

Students are expected to create a contract that describes rules of engagement for the team.

**Deliverable 1 – Proposal** (Due: Week 3)

The project proposal briefly describes the dataset, repository from where the dataset will be obtained, concise statement of the problem the team intends to solve, and details of the datasets that will be used within the project.

**Deliverable 2 – Data Collection Report** (Due: Week 6)

The report should describe procedures followed to collect the data, hurdles faced with data collection, data format, dataset size, how the data is stored, and characteristics of the data.

**Deliverable 3 – Data Preparation Report** (Due: Week 8)

The report should describe the process followed to clean and prepare the data for analysis and procedures followed to verify the quality of the data.

**Deliverable 4 – Descriptive Analytics Report** (Due: Week 11)

The report should include descriptive statistics of the data along with appropriate visualizations, describe hypotheses formed for solving the problem, and attributes selected for predictive analysis.

**Deliverable 5 – Predictive Analytics Report** (Due: Week 15)

The final report should provide an executive summary, introduction, updated data collection report, updated data preparation report, updated descriptive analytics report, descriptions of predictive models used, procedures followed to select attributes for analysis, procedures followed to run the models, metrics used to evaluate models, discussion on interesting findings, conclusion, and appendix.

**School of Computing Symposium**

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CAP 4784 students will present their data analytics project work as a video presentation at the School of Computing Virtual Symposium this spring. Student teams should submit their video files in week 14. The submitted video files will be uploaded to the Symposium YouTube channel and made viewable for the public. CAP 4784 students will be expected to view other student video presentations and submit their evaluations. The videos will be available on the Symposium YouTube Channel.

Please note that if you do not submit the video file, view symposium presentations, and submit evaluations, you will not receive any project presentation points. If you are not able to prepare the video presentation file and submit evaluation forms, you must reach out to the instructor to make alternate arrangements during the first week of the semester.

## Python Programming

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In the class, students will be learning Python as the primary data science programming language. Thus, students are expected to be well-versed with the fundamentals of Python programming.

### Lab Assignments

Students will be expected to complete several lab assignments relevant to Python programming topics. Each of the lab assignments will be individual programming activities.

### Python Programming Project (Due: Week 10)

Students will be expected to develop a data processing pipeline for a given dataset, wherein the data is extracted, manipulated, and transformed into a form that is suitable for descriptive analytics. Students will be creating visualizations to depict summaries of the data. This project will be an individual programming assignment.

## Class Participation

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It is essential to regularly log into Canvas, read the required materials, watch video lectures, perform project activities, perform lab activities, complete quizzes, and contribute to the class discussion forums. Participation in all class activities is critical for maximizing your learning in the online environment. Students are expected to be active participants in the class. Students' participation in the class activities will be assessed for the quantity and quality of the contributions. Class participation is assessed predominantly using quizzes and discussion forum activities.

## Quizzes

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Each course topic will have an associated quiz activity to test your knowledge gained. Each quiz is worth one grade point. Students will be provided with two attempts to complete the activity. The highest score of multiple attempts will be used towards grade calculation. The maximum obtainable grade point via quizzes (for final grade calculations) is 10.

## Discussion Forum Participation

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Each course topic will have an associated discussion forum to encourage discussions among students on the topic. It should be noted that participating in the self-introduction discussion forum in the first week is mandatory. If you do not participate in this forum, you will lose one grade point. The guidelines and rubrics provided below will be used for evaluating your contributions in the discussion forums.

Guidelines for participation in the forums:

- You should submit your initial post(s) early in the session and post subsequent responses to the posts of other students at timely intervals within the duration of the session. Keep in mind that the goal is to have a dynamic discussion that lasts throughout the entire session.

- Your posts and responses should be thorough and thoughtful. Just posting an “I agree” or “Good idea” will not be considered adequate. Support your statements with examples, experiences, or references. However, you are encouraged to be brief — keep each post and response to one or two short paragraphs. Keep in mind that your fellow students will be reading and responding to you, too.
- Make sure to address the discussion questions posed by the instructor. This does not mean you should not extend the topic, but do not stray from the topic.
- Discussions occur when there is dialogue. So, build upon the posts and responses of other students to create discussion threads. Make sure you revisit the discussion forum and respond (if necessary) to what other students have posted to your initial responses.
- When relevant, add to the discussion by including prior knowledge, work experiences, references, Web sites, and other related resources. (giving credit when appropriate).
- Your contributions to the discussions (posts and responses) should be complete and free of grammatical or structural errors.

Rubrics for evaluating discussion forum participation:

<b>Unacceptable 0 points</b>	<b>Good 0.5 points</b>	<b>Excellent 1 point</b>
<b>Criteria: Quantity and timeliness</b>		
<ul style="list-style-type: none"> <li>• Does not create an initial post.</li> <li>• Does not submit early in the session.</li> <li>• Does not reply to another learner.</li> <li>• Participates not at all, or Participates 1-2 times on the same day.</li> </ul>	<ul style="list-style-type: none"> <li>• Creates an initial post.</li> <li>• Replies to another learner.</li> <li>• Participates 3-4 times but postings not distributed throughout the week.</li> </ul>	<ul style="list-style-type: none"> <li>• Creates an initial post.</li> <li>• Submits early in the session.</li> <li>• Replies to more than two learners.</li> <li>• Continues to participate in discussion threads until the end of the session.</li> <li>• Participates more than 4 times and distributed throughout the week.</li> </ul>
<b>Criteria: Demonstrates knowledge and understanding of content and applicability to professional practice</b>		
<ul style="list-style-type: none"> <li>• Post has little or nothing to do with the main topic or restates the central concept.</li> <li>• Post does not demonstrate evidence of knowledge and understanding of</li> </ul>	<ul style="list-style-type: none"> <li>• Post relates to the main topic, but no details and examples are given and have misspellings and grammatical mistakes</li> <li>• Post demonstrates some evidence of</li> </ul>	<ul style="list-style-type: none"> <li>• Post relates to the main topic and adds new concepts, information. It includes several supporting details and examples, and it is free of misspelling and grammatical errors</li> <li>• Post demonstrates clear evidence of knowledge and</li> </ul>

Unacceptable 0 points	Good 0.5 points	Excellent 1 point
<p>course materials and content.</p> <ul style="list-style-type: none"> <li>• Response does not demonstrate evidence of knowledge and understanding of course materials and content.</li> <li>• Does not respond to questions posed by the instructor.</li> </ul>	<p>knowledge and understanding of course materials and content.</p> <ul style="list-style-type: none"> <li>• Response demonstrates some evidence of knowledge and understanding of course materials and content.</li> <li>• Responds to questions posted by instructor but does not engage in premise reflection.</li> </ul>	<p>understanding of course materials and content.</p> <ul style="list-style-type: none"> <li>• Response demonstrates clear evidence of knowledge and understanding of course materials and content.</li> <li>• Response elicits responses and reflection for others.</li> <li>• Response to instructor questions reflects critical thinking process by integrating multiple views or provides authenticated resources to take the discussion deeper.</li> </ul>

**Course Schedule**

It is expected that the student logs into Canvas multiple times a week to perform required course activities. Students should watch the video lectures and other relevant materials uploaded to the Canvas. Students should schedule an appointment for a virtual meeting with the instrument to get clarifications on the course contents and deliverable expectations. Students should come prepared for the virtual meetings with questions for the instructor on the course topics and project-related issues. The student is responsible for all topics presented regardless of their coverage.

Please note that the below listing of chapters does not mean that all text in those chapters would be covered in this course. Only materials pertaining to class would be covered. Throughout the course, the instructor would provide other supplementary materials to provide targeted guidance to team project deliverables.

Week	Topic	Reading Materials	Dues
1	Data Analytics Overview and Python Setup	DSDM – Chapter 1	Syllabus Quiz Discussion 1 Team Info
2	Python Language Basics	PDA – Chapters 1 to 2	Data Science Quiz Discussion 2 Group Contract

Week	Topic	Reading Materials	Dues
3	Python Data Structures	PDA – Chapter 3	Python Quiz Lab – Python Foundations Project - Proposal
4	NumPy	PDA – Chapter 4	Discussion 3
5	Statistics and Probability	DSDM – Chapter 2	Lab 2 – NumPy
6	Pandas	PDA – Chapter 5	Statistics and Probability Quiz Project – Data Collection Report
7	Data Cleaning and Preparation	DSDM – Chapter 3; PDA – Chapter 7	Lab 3 – pandas
8	Data Wrangling	PDA – Chapters 6 and 8	Data Wrangling Quiz Project – Data Preparation Report
9	Data Visualization	DSDM – Chapter 6; PDA – Chapter 9	Lab 4 – Data Wrangling
10	Exploratory Data Analysis	PDA – Chapter 10	Individual Programming Project Discussion 4
11	Regression	DSDM – Chapter 9	Lab 5 – Data Visualization Project - Descriptive Analytics Report
12	Classification	DSDM – Chapter 11	Discussion 5
13	Clustering	DSDM – Chapter 10	Data Analytics Quiz
14	Performance Evaluation	DSDM – Chapter 7	Data Ethics Quiz Discussion 6 Symposium Video File
15	Project Presentations		Project - Predictive Analytics Report Virtual Symposium

### Reference Books:

PDA - Python for Data Analysis, Second Edition by Wes McKinney

DSDM – The Data Science Design Manual by Steven Skiena

### Course Modifications

The instructor reserves the right to modify the course, including schedule, assignment specifications, assignment score distributions, grading criteria, and other relevant aspects to meet the student's needs or due to unexpected events.

## Other Remarks

### Technical Support

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If you experience any problems with your UNF account or Canvas course management system, you may send an email to [helpdesk@unf.edu](mailto:helpdesk@unf.edu) or call the UNF Computer Helpdesk at 904-620-4357.

If you experience any problems with resources provided by the School of Computing or with the School of Computing Labs, you may send an email to Mr. Walter Schuller, [wschul@unf.edu](mailto:wschul@unf.edu). Consider including the instructor in the email if the problem you face pertains to class activities.

### Students with Disabilities

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Students with disabilities who seek reasonable accommodations in the classroom or other aspects of performing their coursework must first register with UNF Student Accessibility Services (SAS) located in Building 57, Room 1500. SAS staff members work with students to obtain required documentation of disability and to identify appropriate accommodations as required by applicable disability laws including the Americans with Disabilities Act (ADA). After receiving all necessary documentation, SAS staff determines whether a student qualifies for services with SAS and if so, the accommodations the student requires will be provided. SAS staff then prepares a letter for the student to provide faculty advising them of approved accommodations. For further information, contact SAS by phone (904) 620-2769, email ([SAScenter@unf.edu](mailto:SAScenter@unf.edu)), or visit the SAS website (<https://www.unf.edu/sas/>).

Military and veteran students who return from combat exposure may be utilizing the post 9/11 GI bill to continue postsecondary education goals and may need both physical and academic accommodations. Contact the Military and Veterans' Resource Center by phone (904) 620-5131 or email [mvrc@unf.edu](mailto:mvrc@unf.edu).

### Student Health and Wellbeing

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The UNF counseling center can help students who are having difficulties managing stress, adjusting to college, or who are feeling sad and hopeless. You can reach the UNF counseling center at <http://www.unf.edu/counseling-center/> or by calling (904)-620-2602 during and after business hours for routine appointments or if you or someone you know is in crisis. Walk-in hours are 10-2 PM Monday-Friday. Crisis appointments are available.

The Victim Advocacy Program provides confidential crisis intervention services to anyone in the UNF community impacted by crime or victimization. Services offered range from emotional support to assistance navigating the criminal justice system. The Victim Advocacy Program is located in Founders Hall, Building 2, Suite 2100. Students may contact the 24-hour Crisis Helpline

at (904) 620-1010. For more information, visit [http://www.unf.edu/womens-center/Victim\\_Advocacy.aspx](http://www.unf.edu/womens-center/Victim_Advocacy.aspx)

### **Satisfactory Progress Policy**

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The School of Computing enforces the “one repeat” rule for all prerequisite and core courses offered by the School for its major programs. Students who do not successfully complete a prerequisite or core requirement for a School of Computing course on the first attempt (i.e., earn a grade of D, F, W, WP, or WF) will be granted one chance to repeat the course. Students who do not successfully complete a prerequisite or core requirement within two attempts will not be permitted to register for courses offered by the School in future semesters. This stipulation applies whether or not the student has declared a major in a School of Computing program.

[http://www.unf.edu/ccec/computing/PoliciesGuidelines/Satisfactory\\_Policy.aspx](http://www.unf.edu/ccec/computing/PoliciesGuidelines/Satisfactory_Policy.aspx)

### **Continuity of Instruction Plan**

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In the event of disruption of normal classroom activities due to an emergency such as a hurricane, pandemic, or other unforeseen event or combination of events, the format of this course may be modified to enable completion of the course requirements. In that event, you will be provided an addendum to this syllabus that will supersede this version. It is your responsibility as a student participant to be proactive during any emergency to find instructions that I will post on Canvas, which you should check daily.

### **Non-Discrimination Policy**

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The University of North Florida (UNF) is committed to providing an inclusive and welcoming environment for all who interact in our community. To accomplish this intent, UNF shall not commit or permit discrimination or harassment on the basis of genetic information, race, color, religion, age, sex, disability, gender identity/expression, sexual orientation, marital status, national origin or veteran status in any educational, employment, social or recreational program or activity it offers. Similarly, UNF will not commit or permit retaliation against an individual who complains of discrimination or harassment or an individual who cooperates in an investigation of an alleged violation of University Regulation. In exercising these standards, the University will not abridge either free speech or academic freedom based on its context. Accordingly, any member of the UNF community who believes that they have been subjected to discrimination, discriminatory harassment, retaliation, or sexual misconduct may seek guidance, counseling and/or file a complaint by contacting: Marlynn Jones, Title IX Coordinator Director, Office of Equal Opportunity and Diversity | UNF Drive, Bldg. I, Suite 1201 Jacksonville, FL 32224 Phone: (904) 620-2513 or via 711 Florida Relay for persons who are deaf or hard of hearing or those with speech impairments and/or limitations.