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| **Syllabus for CIS 1100: Fall 2019** |
| **Syllabus subject to change with notice** |
| |  |  | | --- | --- | | **Instructor Information** | | | Name: | **Dr. Canovatchel** | | Office Location: | **TBD** | | Office Hours: | **Thursday: 8:00 AM – 8:30 AM**  **By Appointment** | | Phone: | **865-6470** | | **Course Information** | | | Course Title: | Introduction to Computer Theory | | Course Number: | **CIS 1100** | | Course Description | This course is designed to give you a broad-based introduction to all aspects of computing. During the course we will be focusing on various aspects of the discipline, including hardware, networking, web, programming logic, ethics, and other aspects of the industry. The goal of this course is to give you a good overview of the computer industry and how things work in order for you to have a solid foundation of knowledge to begin your technical training at Champlain College.  The world of computers is advancing rapidly and becoming an ever more integrated part of our lives and as a result, the level of training for technical people is becoming higher and more difficult. Not that long ago, a course like this would have introduced you to a mouse, keyboard and word processor. Now, most people have those basic skills and we can (actually, have to) start the course at a higher level.  Many of you may be experts in one part of this field or just sophisticated users. That is great and you will be a real asset to the class! Hopefully, you will be learning new things about the field in this class. (If you are not then you should take the challenge exam. You can challenge out of the course by passing the challenge exam AND getting the permission of your degree program’s Chair or Program Director.) | | Day/Time | **Thursdays from 8:30 AM to 10:00 AM – Online Component** | | Location | **CCV Winooski** | | Prerequisite(s) | **None** | | **Student Learning Outcomes** | | |  | 1. Understand what the driving forces of change are in the computer industrythrough a historical perspective of its development. 2. Identify the governing agencies that determine the standards for computer hardware and software. 3. Be able to define the parts of an algorithm and develop a simple algorithm. 4. Understand hexadecimal and binary notation and their use in computer systems. 5. Understand and identify the key parts of computer hardware and its architecture. 6. Understand and implement basic Boolean logic in truth tables. 7. Differentiate between system and application software their respective roles in computer functionality. 8. Identify the key components of a network and how the OSI model determines a network’s development in a basic client-server environment. 9. Identify the key components of an e-commerce system and how database systems support its functionality. 10. Understand the threats and the basic defenses used against threats to a computer network. 11. Understand and identify ethical standards that determine how data is retrieved, stored and made accessible in a networking environment. 12. Implement a basic computer program that implements a simple algorithm using proper programing logic. 13. Understand the need to consider accessibility issues in computing. | | **Textbooks** | | | |  |  | | --- | --- | |  | ***Invitation to Computer Science, 7th ed.***  Authors: Schneider & Gersting  Publisher: Cengage Learning, 2013  ISBN-13: 978-1-305-07577-1  The course does incorporate into the lectures content from the book [*Automate the Boring Stuff with Python: Practical Programming for Total Beginners*](https://automatetheboringstuff.com/). | | | | **Software** | | | | | The software required for this course is free and downloadable via the internet. Installation of each piece of software will be discussed in class as the software is required.) Additional software may be required, but the primary pieces of software utilized in this course are listed here:  [**PyCharm Edu**](https://www.jetbrains.com/pycharm-edu/download/#section=windows) | | |   If you need a license to install this software, [click here](https://www.jetbrains.com/student/).   |  |  |  |  | | --- | --- | --- | --- | | **Course Schedule** | | | | | **Class** | **Topics** | |  | | Week 1 | | Syllabus Review Introduction to the Algorithm  File & Folder Management  A History of Computing |  | | Week 2 | | Semester Project Constructing an Algorithm |  | | Week 3 | | An Introduction to Boolean Logic  An Introduction to Python:  IDE: PyCharm  Variables  Simple Methods - Print |  | | Week 4 | | An Introduction to Computer Architecture and Hardware  Python Programming:  Arrays  Conditionals |  | | Week 5 | | System & Application Software  The Virtual Machine |  | | Week 6 | | High-Level Programming Languages  Python Programming:  Simple Methods - Input  Loops |  | | Week 7 | | Mid-Term Exam |  | | Week 8 | | Networking and the OSI Model  Python Programming:  Functions  Libraries |  | | Week 9 | | e-Commerce, Databases and Managing Privacy Issues |  | | Week 10 | | Social and Ethical Considerations in Computing  Python Programming:  Objects  Classes |  | | **Class** | | **Topics** |  | | Week 11 | | Information Security and Managing System Threats |  | | Week 12 | | Managing Information Systems |  | | Week 13 | | Artificial Intelligence  Accessibility Issues |  | | Week 14 | | Final Exam |  | | Week 15 | | Project Presentations |  |  |  | | --- | | **Semester Project** | | To find out more information about the semester project, please log into Canvas and access this course. All of the requirements, particulars and all deliverables are contained in this section of the course in Canvas. You are totally and completely responsible for meeting all project requirements. Failure to meet these requirements will lead you to earn an "F" for the project. This will negatively impact your grade in this course. Feel free to discuss any aspects of the project with your instructor. | | **Exams** | | Each exam will consist of application problems. Textbooks, class notes, and individual student materials may be used, however, the work must be completed by you without assistance from anyone else. It is expected that everyone will be available the week of each exam. Make-up tests are strongly discouraged and will be given at the instructor's discretion, and only when notification is received in advance. | | **Quizzes** | | There are a series of quizzes that will be given over the course of the semester. Most of these quizzes are take home quizzes due to the fact they will require additional reading and research. As with exams you may use textbooks, class notes, and individual student materials. Again, the work must be completed by you without assistance from anyone else. You will be given time at the end of each class to complete the quiz. | | **Labs & Classwork** | | Constant re-enforcement of the techniques and applications of database concepts and development will increase your skills. You will be given assignments that will develop these skills. All class labs and classwork must be submitted at the end of the class it was assigned. Failure to do so will result in a student receiving an “F” for that lab/classwork. | | **Participation, Attendance & Course Policies** | | 1. **Missed Classes:**   Attendance will be taken in each class. Participation is not a part of your grade. Show up or do not show up, it is your choice. Just like having a job, you can choose to s how up or do not show up. The result of not showing up is generally you lose your job. This leads to no cash flow and unemployment. In this class, don’t show up and you will fail. If you are absent the student is also responsible for all material missed.   1. **Late to Class / Leaving Early from Class**   I understand that sometimes being late to class or having to leave class early is unavoidable for personal reasons.   1. **Acceptable Use of Computers During Class**   Computers are not to be used during lectures and discussions. If labs, quizzes or exams require the use of computers, Internet browsing unrelated to covered materials is not allowed. Further, at NO time is the use of any instant messaging program allowed during class time. If your intent is to come to class to play computer games, do yourself a favor. Stay home, sleep late and realize you just saved yourself a trip in to waste your time. Such activity is not only detrimental to your learning; it is a distraction to those around you. Out of simple respect for others, give it a rest, you can play later. No employer will ever ask you how well you did playing a particular game. Nor will they expect you to do play games while collecting a salary to produce a Web application. Now is the time to discipline yourself and develop the skills you need to jump-start your career.   1. **Use of Cell Phones**   Cell phones must be placed in quiet or vibrate mode during class and should be used for security purposes only and may not be disruptive to the class in any way. |  |  | | --- | | **Evaluation** | | This is a course where the assignments and exams are designed in such a way that you must demonstrate your skill and expertise with overall Web development.   |  |  | | --- | --- | | Project | 15% | | Labs/Classwork | 10% | | Discussions | 5% | | Quizzes | 15% | | Mid-Term Exam | 25% | | Final Exam | 30% | | | The following scale will be used to determine grades for course:   |  |  | | --- | --- | | Grade | Range | | A | 93+ | | A- | 90-92 | | B+ | 87-89 | | B | 83-86 | | B- | 80-82 | | C+ | 77-79 | | C | 73-76 | | C- | 70-72 | | D+ | 67-69 | | D | 63-66 | | D- | 60-62 | | F | Below 60 | | |