CSC 223 – Advanced Scientific Programming
Section 010 & 020, Spring 2020

Meeting Time & Place:
Section 010: MoWeFr 8:00am – 8:50am, OM 158
Section 020: MoWeFr 9:00am – 9:50am, OM 158

Instructor:	Dr. Dylan Schwesinger
Office	Old Main 252; Phone: (484) 646 - 4389
email	schwesin@kutztown.edu
Web URL	https://csitrd.kutztown.edu/~schwesin
Office Hours	MoFr 10:00am – 12:00pm, We 10:00am – 11:00am

Course Description: This course takes students deeper into the theory of scientific programming, building on a foundation of sound programming methodology and an understanding of the modern programming languages prevalent in scientific communities and of the specialized tools and libraries. Thorough grounding in computer science principles will enable the student to gain knowledge and skill to best leverage these tools for scientific study and research. Topics include basic concepts of problem analysis and program design both from a procedural and structural standpoint - algorithm development, algorithm analysis, data structures, data storage, data analysis and data visualization. Additional topics will include applications to scientific problems.

Prerequiste: (C or better in CSC 123) OR (C or better in CSC 135)

Text: None

Grading Policy:	Assignments	60% of grade
	Exams	40% of grade
	Participation	± 5% of grade

Each grade item will be scored on an integer scale from $1 - 5$ based on the following considerations:

5	Thorough understanding of the material.
4	Acceptable understanding of the material.
3	Some understanding of the material.
2 or 1	Poor understanding of the material.

The University Plus/Minus Grading Scale will be used for letter grades. In order to receive a passing grade for the course, you must have a passing exam average. Letter grades will be assigned according to the following scale: A: 4.65 and above, A-: 4.50 - 4.64, B+: 4.15 - 4.49, B: 3.85 - 4.14, B-: 3.50 - 3.84, C+ 2.85 - 3.49, C: 2.50 - 2.84, D: 1.50 - 2.49, F: 1.49 and below.

Exams: Exams must be taken when scheduled unless I have approved an alternate time prior to the scheduled exams. Missed exams will be handled on an individual basis and will require written documentation for the absence. University policy will be followed.

Assignments: All assignments are due at the due date and time. Late assignments will not be accepted. All assignments should include the following information: your name, the course (CSC 223), semester and year, and assignment number. For programming assignments, the computer science documentation standard must be followed, which is located at `https://www.kutztown.edu/Departments-Offices/A-F/ComputerScienceInformationTechnology/Documents/Student%20Resources/DocumentationStandard.pdf`

Collaboration: Collaboration on homework is encouraged. You are free to consult any outside sources such as tutorials, books, and wikis, and to seek help from sources such as `https://stackoverflow.com`. However, the following restrictions apply: homework solutions must be written individually and you must cite any people or resources you consulted in completing an assignment. Not following these restrictions will result in a score of zero on the assignment in question.

Attendance: Regular attendance and class participation are expected. Students are responsible for all material covered in class.

Email Correspondence: The best way to contact me is via email. When sending email, please indicate the course number in the subject line by placing it within brackets, for example, "[CSC 223] Need help on Assignment 1". I will only respond to email sent from your Kutztown University email address.

Classroom Etiquette: Consideration for your classmates, instructor, and class is expected. Please come to class on time and prepared to learn. There should be no classroom conversations, sleeping, cell phone usage, or other disruptions to the class.

Academic Dishonesty: All students should familiarize themselves with the Computer Science Academic Integrity Policy located at `https://www.kutztown.edu/Departments-Offices/A-F/ComputerScienceInformationTechnology/Documents/Student%20Resources/AcademicIntegrityPolicy.pdf` Any student copying work or giving work to another student will receive a zero for the assignment and will be referred to the department chairperson.

Accreditation: Any course work submitted to the instructor (including but not limited to assignments, tests, and projects) may be photocopied and retained for the purpose of assessment, accreditation and quality improvement, after removal of any information identifying the student.

Students with Disabilities: Students with diagnosed disabilities or special needs that require accommodations for this course must first contact the Disability Services Office, located in the Office of Human Diversity at 215 Stratton Administration Building. If you have already disclosed a disability, please feel free to speak with me privately so that I may assist you.

Gender-Based Crimes: Educators must report incidents of gender-based crimes, including sexual assault, sexual harassment, stalking, dating violence, and domestic violence. If a student discloses such incidents to me during class or in a course assignment, I am not required to report the disclosure, unless the student was a minor at the time the incident occurred. Regardless of the students age, if the incident is disclosed to me outside the classroom setting or a course assignment, I am required by law to report the disclosure, including relevant details, such as the names of those involved in the incident, to Public Safety and Police Services and to Mr. Jesus Peña, Title IX Coordinator.

Note: This syllabus is subject to change at the discretion of the instructor.