BMI 503 Syllabus

* Time:
   Monday 10:00am to 12:30pm. Hybrid. Zoom recording available at blackboard.
   Instructor: Chao Chen (chao.chen.1@stonybrook.edu)
   Office hour: Mon 12:30pm – 1:30pm, Thu 12pm – 1pm

* Summary:
The class is for students with no background of computation. The goal is to prepare them for basic data analytics tasks.

* Reference books:
-- Python for Everybody (https://www.py4e.com/)
-- Data Structures and Algorithms in Python: Michael T. Goodrich et al.
-- Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython
Book by Wes McKinney.

* The course will be combined with teaching and project development. The goal is to help students to

1) understand how to use various tools for data processing and analysis.
2) learn basic skills to implement simple programs to achieve different goals. Learn to debug the code.
3) learn to analyze efficiency of the program and to optimize the time and memory consumption.

* More detailed content summaries:
-------- Python programming essence -----------
* variables, loops, functions, object-oriented programming.
* running the code in a development environment, debug the code.
* IO, reading/writing files, string operations.

--------- Data structures and basic programming projects -------------
* list, array, stack, queue, tree, heap
* sorting, dynamic programming
* basic complexity analysis

* Evaluation and Projects
   • Homeworks (2-3 projects) 40 pts
   • Midterm 30 pts (time TBD)
   • Final 30 pts (Dec 12)

Student Accessibility Support Center Statement
If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, Stony Brook Union Suite 107, (631) 632-6748, or at sasc@stonybrook.edu. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Academic Integrity Statement
Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Professions, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic_integrity/index.html

Critical Incident Management
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.