

Computer Science Department

Registration Newsletter for Spring 2023

Registration is around the corner! Start thinking about your courses for next semester.

Advising Window: October 17 – 31
Registration Window: November 1 – 11

Check PAWS to find your academic advisor and Spring 2023 registration window.
Please watch for an email from your academic advisor with instructions for making advising appointments.

All Computer Science majors must meet with their academic advisors before registering for classes.

A registration hold has been placed on your PAWS account and will be removed **only** after the advising meeting.

You will not be able to register for Spring 2023 courses until you have met with your academic advisor and have had your advising hold removed after the meeting.

Spring 2023 Electives

CSC 275-01: Intro to Data Science, W, 5:30 – 6:50 PM, Dr. Russo, 0.5 units

This course does not count for Computer Science credit and can only be taken as a free elective. The acceleration of data collection in all areas of the public and private sectors has resulted in a high demand for those with the skills required to extract insight from data and to help guide organizational strategy. In this course we will study and apply the Python Data Science toolkit to real world data sets. This course introduces the Python programming language and then covers important topics such as data wrangling, data storage, data visualization, and basic machine learning, including linear modeling, clustering, and dimensionality reduction. This course is suitable for students with some knowledge of programming and program control flow.

Spring 2023 Advanced Core Options

CSC 315-01: Database Systems, T/F, 9:30 – 10:50 AM, Prof. DeGood

CSC 315-02: Database Systems, T/F, 11:00 AM – 12:20 PM, Prof. DeGood

(Prerequisites: CSC 230, CSC 270, and MAT 127, each with a grade of C or higher. Math majors may use MAT 200 and CSC 271 each with a grade of C or higher in lieu of CSC 270.)
This course introduces students to the fundamental concepts necessary for designing, using, and implementing database systems. It stresses the fundamentals of database modeling and design, the language and facilities provided by database management systems, and system implementation techniques. A database management system like Oracle or PostgreSQL is utilized to underscore concepts learned in class.

Spring 2023 Options Courses

CSC 380-01: Artificial Intelligence, M/TH, 2:00 – 3:20 PM, Dr. Yoon

(Prerequisites: CSC 230, 270, or MAT 127, each with a grade C or higher. Math majors may use MAT 200 and CSC 271 each with a grade of C or higher in lieu of CSC 270.)

The study of how to make the computer behave intelligently. Topics: state-space methods of problem solving, heuristic search techniques, representation and use of knowledge, applications and design of expert systems, natural language processing, vision and image understanding. Design of specifications for intelligent agents is discussed at length and a high level implementation is developed.

CSC 470-01: Special Topics: Secure Coding, T/F, 2:00 – 3:20 PM, Prof. DeGood

(Prerequisites: CSC 230, CSC 270 and MAT 127 each with a grade of C or higher. Math majors may use MAT 200 and CSC 271 each with a grade of C or higher in lieu of CSC 270.)

A comprehensive introduction to secure software design and implementation. The student will learn to approach software security from a design perspective, to use design patterns for secure code, and to write, test, and debug programs using secure programming techniques. Topics of this course include domain-driven design principles; application security; system software security; cloud security; the zero trust security model; failures and exception handling; and problems with legacy codebases. Students will demonstrate their knowledge through hands-on programs, exercises, and case study assignments.

CSC 470-02: Special Topics: 3D Game Development, M/TH, 12:30 – 1:50 PM, Dr. Ferdous

(Prerequisites: CSC 230, CSC 270 and MAT 127 each with a grade of C or higher. Math majors may use MAT 200 and CSC 271 each with a grade of C or higher in lieu of CSC 270.)

This course covers all aspects of 3D game development using popular game development platform Unity. The topics include modeling, C# scripting, light, camera, collisions/ physics, audio, character animation, GUI, shadows, level generation, and deployment in windows, linux, android, and virtual reality systems (e.g., Oculus, HTC Vive, Google Daydream, etc.)

CSC 471-A: Genomics & Bioinformatics, M/TH, 9:30 – 10:50 AM & M, 12:30 – 3:20 PM, Dr. Nayak

(Prerequisites: BIO 201, CSC 230, CSC 270, and MAT 127, each with a grade of C or higher. Math majors may use MAT 200 and CSC 271 each with a grade of C or higher in lieu of CSC 270.)

This course will cover theoretical and practical components of genomics and bioinformatics. The major topics will include mapping and sequencing genomes, sequence alignment of nucleic acids and proteins, haplotype maps, analysis of complex traits, parallel profiling of gene expression, proteomics, phylogenetic analysis, and data mining. The laboratory will begin with the in silico analysis of gene families, continue to the formulation of a testable hypothesis about gene function, writing a mini-grant for peer review, testing of the hypothesis in a model organism, and conclude with a formal presentation of the data generated during the semester. This course is best suited for undergraduates who wish to continue with a career in basic science or biomedical research.

Couldn't get into the CS courses you wanted?

Complete the CS Department's Qualtrics Form in order to get on the wait-list (*after your registration window has opened*):

<https://bit.ly/3SXJ7oV>


Computer Science Department Advising Notes

Advising Resources

Visit the [CS Department's advising webpage](#) for more information on course planning, the suggested sequence, and requirements for internships and mentored research projects.

Reminder: all CS juniors *must* take CSC 299 in Spring 2023.

PAWS Holds

During advising, review your PAWS account for any financial, health or housing requirement, or other holds you may have. Until these holds are removed, you will not be able to enroll during registration. The CS Department **cannot** remove these holds and you will need to follow instructions to meet the requirements by clicking the  "hold" icon on PAWS and contacting the appropriate office.

Research Forms

Fully completed mentored research forms for CSC 298, 498, and 499 must be submitted online before the end of the registration period, 4:30 P.M. on November 11, 2022.

Registration Questions?

Please contact the CS Office (cs@tcnj.edu), Dr. Salgian (salgian@tcnj.edu), or your CS academic advisor.

Spring 2023 Computer Science Courses

199-01	W	11:00 – 11:50 AM	Dr. Ferdous
220-01	T/F T	9:30 – 10:50 AM 2:00 – 3:20 PM	Dr. Russo
220-02	T/F F	3:30 – 4:50 PM 2:00 – 3:20 PM	Dr. Russo
230-01	M/TH M	12:30 – 1:50 PM 2:00 – 3:20 PM	Dr. Li
230-02	M/TH TH	3:30 – 4:50 PM 2:00 – 3:20 PM	Dr. Li
230-03	M/TH TH	2:00 – 3:20 PM 3:30 – 4:50 PM	Dr. Ferdous
270-01	M/TH M	9:30 – 10:50 AM 11:00 AM – 12:20 PM	Dr. Salgian
270-02	M/TH TH	12:30 – 1:50 PM 11:00 AM – 12:20 PM	Dr. Salgian
270-03	T/F T	9:30 – 10:50 AM 11:00 AM – 12:20 PM	Dr. Turka
270-04	T/F F	2:00 – 3:20 PM 11:00 AM – 12:20 PM	Dr. Turka
275-01	W	5:30 – 6:50 PM	Dr. Russo
299-01	M	11:00 AM – 12:20 PM	Dr. Knox
299-02	M	2:00 – 3:20 PM	Dr. Knox
299-03	M	3:30 – 4:50 PM	Dr. Knox
315-01	T/F	9:30 – 10:50 AM	Prof. DeGood
315-02	T/F	11:00 AM – 12:20 PM	Prof. DeGood
325-01	M/TH TH	9:30 – 10:50 AM 11:00 AM – 12:20 PM	Dr. Knox
335-01	T/F	2:00 – 3:20 PM	Dr. Papamichail
345-01	M/TH TH	9:30 – 10:50 AM 11:00 AM – 12:20 PM	Dr. Yoon
345-02	T/F F	11:00 AM – 12:20 PM 2:00 – 3:20 PM	Dr. Das
380-01	M/TH	2:00 – 3:20 PM	Dr. Yoon
415-01	M/TH M	9:30 – 10:50 AM 11:00 AM – 12:20 PM	Dr. Pulimood
415-02	M/TH TH	12:30 – 1:50 PM 11:00 AM – 12:20 PM	Dr. Pulimood
445-01	T/F	3:30 – 4:50 PM	Dr. Papamichail
470-01	T/F	2:00 – 3:20 PM	Prof. DeGood
470-02	M/TH	12:30 – 1:50 PM	Dr. Ferdous
471-A	M/TH M	9:30 – 10:50 AM 12:30 – 3:20 PM	Dr. Nayak