

Physics 515 - Data Analysis Techniques

Fall 2025

Course website <https://bright.uvic.ca>

Assignments and notes will be posted and completed assignments are to be uploaded to this website.

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Lecture schedule Mondays, Thursdays 11:30-12:50 Clearihue Building A325

Textbook Purchase the coursepack from the bookstore as a reference for written exams.

Course description An advanced course in data analysis for the physical sciences. The lectures cover probability theory, Monte Carlo methods, and statistical analysis techniques.

Grading There will be assignments (including online quizzes), written exams, and a project. The final grade is determined as follows:

assignments 30%
exams (2) 50%
project 20%

Letter grades are obtained by converting the numerical scores as follows.

F	D	C	C+	B-	B	B+	A-	A	A+
0-49	50-59	60-64	65-69	70-72	73-76	77-79	80-84	85-89	90-100

Generative AI In this course I welcome the use of generative AI tools such as ChatGPT to help learn course material and complete course assignments. Please note that you can opt for not using generative AI at all. In the case you opt to use generative AI for assignments, you must provide proper citation of the tools you used and describe how you used it. The written exams are held in class during the term, without computer access, and only the coursepack is allowed as a reference.

Programming The recommended programming language for the course assignments is Python using Jupyter Notebook. Alternatively, you may use one of: C++, Java, or MATLAB. You will need to submit your code with your assignments.

Course experience Near the end of term you will be invited to complete an anonymous survey regarding your learning experience. The survey site is: <http://ces.uvic.ca>