



SCUDEM Useful Resources For Coaches and Students

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Latex/Overleaf

LaTeX is a document preparation system that allows one to create pdf documents easily, including text, mathematical equations, graphs, images and more. Overleaf is an online LaTeX editor that is easy to use. Beamer is a useful environment inside LaTeX for preparing correct and elegant mathematical font and image presentations.

<https://www.overleaf.com/>

<https://www.overleaf.com/learn/latex/beamer>

<https://www.iro.umontreal.ca/~simardr/pgfplots.pdf>

<http://www.maths.adelaide.edu.au/anthony.roberts/LaTeX/pgfplotBasics.pdf>

<https://www.caam.rice.edu/~heinken/latex/symbols.pdf>

<https://tex.stackexchange.com/>

Maple

Maple is a symbolic and numeric computing environment as well as a multi-paradigm programming language. It covers several areas of technical computing, such as symbolic mathematics, numerical analysis, data processing, visualization, and others.

<https://www.maplesoft.com/products/maple/students/>

Mathematica

Wolfram Mathematica is a modern technical computing system spanning most areas of technical computing - including neural networks, machine learning, image processing, geometry, data science, visualizations, and others. The system is used in many technical, scientific, engineering, mathematical, and computing fields. Wolfram Alpha is a FREE command line platform for executing Mathematica code.

<https://www.mathematica.org/>

<https://www.wolframalpha.com/>

<https://www.wolfram.com/language/fast-introduction-for-math-students/en/>

<https://www.youtube.com/watch?v=sWY0FATWXw>

MatLab

(MATLAB is a multi-paradigm numerical computing environment and proprietary programming language developed by MathWorks. MATLAB allows matrix manipulations, plotting of functions and data, implementation of algorithms, creation of user interfaces, and interfacing with programs written in other languages.

https://www.mathworks.com/products/matlab.html?s_tid=hp_products_matlab

<https://www.youtube.com/watch?v=MeuCAT5HDh0>

Octave

GNU Octave is software featuring a high-level programming language, primarily intended for numerical computations. Octave helps in solving linear and nonlinear problems numerically, and for performing other numerical experiments using a language that is mostly compatible with MATLAB.

<https://www.gnu.org/software/octave/>

Sage

SageMath is a free open-source mathematics software system licensed under the GPL. It builds on top of many existing open-source packages: NumPy, SciPy, matplotlib, Sympy, Maxima, GAP, FLINT, R and many more.

<https://sagecell.sagemath.org/>

<https://www.youtube.com/watch?v=No9jQj0t4J8>

<https://www.youtube.com/watch?v=NxydhZSSOzw>

Google Drive

Google Drive is a file storage and synchronization service developed by Google. It allows users to store files on their servers, synchronize files across devices, and share files.

<https://www.youtube.com/watch?v=82CUzqqUxKU>

PowerPoint

Alternative Google Slides

<https://www.youtube.com/watch?v=kHRc-3rMCg4>

<https://www.youtube.com/watch?v=D8JV3w4TOVw>

<https://www.youtube.com/watch?v=MYgjFGT7INy>

Geogebra

GeoGebra is an interactive geometry, algebra, statistics and calculus application, intended for learning and teaching mathematics and science from primary school to university level.

<https://www.geogebra.org/?lang=en>

<https://www.youtube.com/watch?v=1cBXWi66-tY>

<https://www.youtube.com/watch?v=whpCnzWECAI>

<https://www.youtube.com/watch?v=zuuyW2JJOrc>

Excel

Microsoft Excel is a spreadsheet developed by Microsoft for Windows, macOS, Android and iOS. It features calculation, graphing tools, pivot tables, and a macro programming language called Visual Basic for Applications. Alternative Google Sheets.

<https://www.youtube.com/watch?v=7RCdzTpK00A>