1. **The Cain Project in Engineering and Professional Communication**, [Designing Effective Graphics Using MATLAB](http://cnx.org/content/m15939/latest/)
   **Notes:** Type: Article; Found Using: Connexions.org
   **Description:** This PowerPoint file of 40 slides explains the types of graphs (line graphs, column or bar charts, pie charts, and ribbon graphs) that may be prepared with Matlab software. It tells how to choose the right one for the type of data to be displayed, taking into consideration the engineer's purpose, audience, and context. It also demonstrates the commands used to make the graphs legible and easy to interpret.
   **Terms of Use:** Various, see course page

2. **Saylor.org**, [Computer-Aided Design](http://www.saylor.org/courses/me104/)
   **Notes:** Type: Course; Found Using: Saylor.org
   **Description:** CAD, or computer-aided design, is a powerful modeling tool that technical professionals use. With CAD, architects can draw up building plans and engineers can develop component and system designs. Some CAD programs even allow users to perform stress analysis, demonstrating how well a proposed structure will fare when put to use. For example, when does a load become too big? How much weight can be put onto a bridge before it becomes structurally unsound? Using CAD, professionals can create precise engineering drawings in both 2- and 3-D, complete with dimensions and specifications, in a neat and readable format. This modeling method has taken design to a whole new level of efficiency and accuracy.

3. **Massachusetts Institute of Technology**, [Introduction to Design Computing](http://ocw.mit.edu/courses/architecture/4-500-introduction-to-design-computing-fall-2008/)
   **Notes:** Type: Course; Found Using: OERCommons.org
   **Description:** Explores the role of computer visualization as a representational medium. Visualization is widely used in scientific, engineering, and design disciplines to help people understand complex phenomena and constructs. The key intellectual challenge is to develop the right visual metaphors for conveying information in the most effective way. Through programming projects and applications work, real and imaginary environments are constructed, probed, and displayed. Also covers the relevant computer graphics methods and data representations. Required of Course IV majors. This course will introduce students to architectural design and computation through the use of computer modeling, rendering and digital fabrication. The course focuses on teaching architectural design with CAD drawing, modeling, rendering and rapid prototyping. Students will be required to build computer models that will lead to a full package of architectural explorations within a computational environment.
   **Link:** [http://ocw.mit.edu/courses/architecture/4-500-introduction-to-design-computing-fall-2008/](http://ocw.mit.edu/courses/architecture/4-500-introduction-to-design-computing-fall-2008/)

   **Notes:** Type: Course; Found Using: OERCommons.org
   **Description:** Introduction to computer graphics hardware, algorithms, and software. Topics include: line generators, affine transformations, line and polygon clipping, splines, interactive techniques, perspective projection, solid modeling, hidden surface algorithms, lighting models, shading, and animation. Substantial programming experience required. 6.837 offers an introduction to computer graphics hardware, algorithms, and software. Topics include: line generators, affine transformations, line and polygon clipping, splines, interactive techniques, perspective projection, solid modeling, hidden surface algorithms, lighting models, shading, and animation. Substantial programming experience is required.
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