

Info (minus INCOSE) from http://cty.ihu.edu/imagine/resources_engineering

WEBSITES

SYSTEMS ENGINEERING:

INCOSE – International Council on Systems Engineering

The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization founded in 1990. Our mission is to share, promote and advance the best of systems engineering from across the globe for the benefit of humanity and the planet.

Systems Engineering is an interdisciplinary approach and means to enable the realization of successful systems. It focuses on defining customer needs and required functionality early in the development cycle, documenting requirements, then proceeding with design synthesis and system validation while considering the complete problem:

Systems Engineering integrates all the disciplines and specialty groups into a team effort forming a structured development process that proceeds from concept to production to operation. Systems Engineering considers both the business and the technical needs of all customers with the goal of providing a quality product that meets the user needs.

<http://www.incose.org/>

ENGINEERING WEBSITES

American Society for Engineering Education’s Precollege Page

At this interactive site, visitors may click on playing cards for information on careers in a wide variety of engineering fields. <http://egfi-k12.org>

Applied Math and Science Education Repository (AMSER)

This site provides links to a wide variety of engineering-related materials, including study results, government bills, reports, and scientific papers.

<http://amser.org/index.php?P=BrowseResources&ParentID=972651>

Beginner’s Guide to Aerodynamics

Here NASA provides activities, movies, analyses, and detailed explanations of aerodynamic concepts ranging from science fundamentals to aircraft forces and baseball.

<http://www.grc.nasa.gov/WWW/K-12/airplane/bga.html>

Discover Engineering

This interactive site of the National Engineering Week Foundation includes games, activities, resources, and downloads all related to engineering. Be sure to click on “cool stuff” for a clickable map to engineering sites around the country. www.discoverengineering.org

Engineer Girl

Curious girls may explore engineering careers, find out what classes to take in high school to pursue an engineering career, ask an engineering question, and more. www.engineergirl.org

Engineer Your Life

This site bills itself as a guide to engineering for high school girls, but also contains links to resources for counselors, parents, and engineers. Here you can meet women engineers, find your dream job, and learn how to get it. www.engineeryourlife.org

Engineering.com

Get lost in this site, which features a range of resources, including games and puzzles, Ask an Engineer, directories of professional engineering organizations and engineering schools, and a virtual library with engineering-related articles, biographies, and reference material. www.engineering.com

Engineers for a Sustainable World

ESW is made up of students, university faculty, and professionals dedicated to building a more sustainable world for current and future generations. Check out their site to find out how you can get involved. www.esustainableworld.org

How Stuff Works

Take the Ultimate LEGO Quiz, print and solve color jigsaw puzzles, or pose a question to Stuff You Want to Know (e.g., How does the iPad work?). www.howstuffworks.com

LabCAST

MIT's Media Lab has put together this site where you can view video presentations of new technology created by MIT students. Wholly entertaining and totally cool. <http://labcast.media.mit.edu>

MIT Open Course Ware (OCW)

Here you'll find free access to course materials used in almost all MIT courses, including syllabi, lecture notes, problem and answer sets, readings and reading lists, videos, and more. <http://ocw.mit.edu>

NASA Online Learning

At this site, you can view any (or all!) of a series of 30-minute videos that highlight NASA research, new technologies, and more. www.knowitall.org/nasa/destination

Network for Earthquake Engineering Simulation (NEES)

This shared national network aims to improve our understanding of earthquakes and their effects, and includes the latest earthquake research, education, training, and news. www.nees.org

Popular Mechanics

This site provides an entertaining look at technology, science, autos, news with analysis, and more. www.popularmechanics.com

Try Engineering

This site offers an extensive array of engineering resources, including an online newsletter. www.tryengineering.org

Worldwide Mechanical Engineering Websites

This is a searchable directory of over 600 mechanical engineering and related websites at colleges and universities worldwide.

http://www.asme.org/Education/College/Worldwide_Department_Websites.cfm

Writing Guidelines for Engineering and Science Students

Provided by Penn State University, this site is a great web resource for all engineering and science students, and includes models, exercises, and advice for documents they will likely encounter in school and eventually, in their professions. <http://writing.engr.psu.edu>

BOOKS ON ENGINEERING

21 Things Every Future Engineer Should Know: A Practical Guide for Students and Parents
by Pat Remick (Kaplan, 2006).

Altering the Biological Blueprint: The Science of Genetic Engineering
by Darlene R. Stille (Compass Point Books, 2010).

Built to Last by George Sullivan (Scholastic Nonfiction, 2005).

Citizen Engineer: A Handbook for Socially Responsible Engineering
by David Douglas and Gre Papadopoulos (Prentice Hall, 2010).

Cool Careers in Engineering by Matt Hutson (Sally Ride Science, 2010).

The Design of New Things by Donald A. Norman (Basis Books, 2009).

Electric Dreams: One Unlikely Team of Kids and the Race to Build the Car of the Future
by Caroline Kettlewell (Da Capo Press, 2004).

Electric Universe: How Electricity Switched on the Modern World
by David Bodanis (Three Rivers Press, 2006).

The Essential Engineer: Why Science Alone Will Not Solve Our Global Problems
by Henry Petroski (Knopf, 2010).

LEGO: A Love Story by Jonathan Bender (Wiley, 2010).

The Musical Engineer: A Music Enthusiast's Guide to Careers in Engineering and Technology
by Celeste Baine (Bonamy Publishing, 2007).