

Overview

Key benefits

- Support and enhance existing teaching and new courses for any teaching approach
- Inspire and engage students in courses related to materials or processes
- Promote inter-disciplinary learning and project work through all years of study

What do you get?

- Software
- Information resources
- Teaching resources
- Support for standard texts
- Training and support

EduPack editions

EduPack editions augment the Standard Edition with specialist databases and teaching resources:

- Aerospace
- Architecture
- Bio Engineering
- Design
- Eco Design
- Low Carbon Power
- Polymer
- Sustainability & the Built Environment

GRANTA CES 2012 EDUPACK

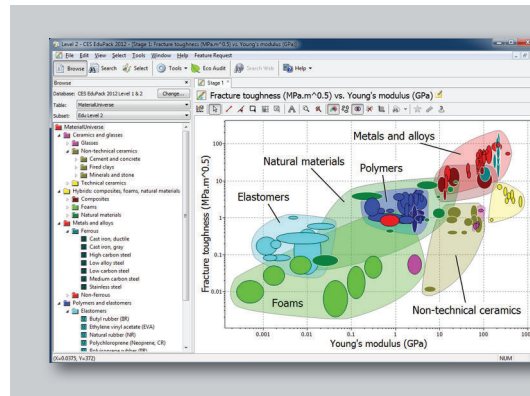
“The set from the Elements database is a treasure trove! I greatly appreciate your bringing them to my attention”

Mark De Guire of the Department of Materials Science & Engineering,
Case Western Reserve University

Further comments & reviews at www.grantadesign.com/education/examples.htm

A Unique Teaching Resource for Materials

CES EduPack™ is the world-leading teaching resource for materials in engineering, science, processing, and design. Originating in the work of Professor Mike Ashby and colleagues at the University of Cambridge, EduPack has been extensively developed by Granta Design in collaboration with Professor Ashby and a growing community of users at over 800 universities and colleges around the world.



A materials property chart created and displayed within the CES EduPack software. The chart illustrates properties in an engaging and informative way and enables selection of materials for specific design objectives. Here, the chart plots fracture toughness against Young's modulus, helping to guide fracture-resistant design. Approximately 100 materials from the (intermediate) Level 2 of the CES EduPack database are represented.

CES EduPack is centered around comprehensive materials information resources and specialist software tools that provide a powerful, yet easy-to-use and highly visual way to explore the world of materials and processes. These computer-based resources are augmented with papers, textbooks, lectures, projects, and exercises.

The result is a unique resource that supports materials, design and sustainability-related courses in subject areas including general and mechanical engineering, manufacturing, materials science, industrial and product design, and a wide range of specialist subject areas (see **EduPack Editions**, left). As well as broad subject coverage, EduPack can be applied in all years of undergraduate study and in postgraduate teaching and research. For example, it offers different levels of information for introductory, intermediate, and advanced courses.

Supporting different teaching approaches and methods

CES EduPack aims to support the full spectrum of teaching approaches, with links to many standard materials texts, and features that can be applied equally well in science-led or design-led teaching. Uses of EduPack include preparing and presenting lectures for classroom teaching, hands-on use in project- and problem-based learning, and use in self-teaching. More at www.grantadesign.com/education/approach.htm

Forging links across the curriculum

Many universities and colleges are seeking to improve the integration of their courses. Courses in different subject areas can be linked via the use of EduPack as a common resource. Our **campus-wide licenses** are specifically designed to support this process.

Product overview



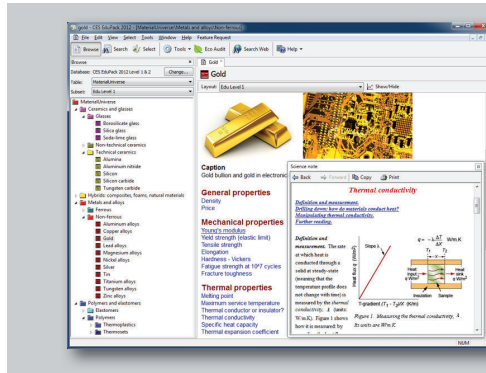
What do you get with CES EduPack?

Software

Browse and search the extensive EduPack information resources (see below). Plot materials property charts, helping students to explore materials space. Apply a structured methodology to compare materials and processes and complete materials selection exercises. Use the Eco Audit Tool to introduce key concepts in eco design, and the innovative Hybrid Synthesizer to help students explore the properties of new composite materials. The software is easy-to-use, highly visual, and engaging.

Information resources

The Standard Edition includes a unique Materials and Processes Database providing comprehensive information on technical, economic, and environmental properties. Three levels support teaching throughout the curriculum, from Level 1 (basic property data, descriptive text, and application images for 69 materials) to Level 3 (detailed properties for >3,750 materials). Students can drill down to 'Science Notes', textbook-style explanations of the underlying science. Specialist Editions add databases tailored for polymers, eco design, architecture, aerospace, nuclear power, low carbon power, energy storage systems, and bio materials. Links to web resources (e.g., ASM handbooks) support further research.



Viewing materials information. The datasheet for gold from the Level 2 MaterialUniverse is displayed, showing an image of the material in use, descriptive text, and property data. Property names, such as 'Young's modulus', are hyperlinks. Clicking brings up a Science Note, as shown here for thermal conductivity, that introduces the underlying science.

Support for leading textbooks

CES EduPack is used with leading textbooks across a wide range of subject areas and teaching approaches. EduPack information resources provide specific references to books by Ashby, Ashby & Jones, Callister, Budinski and Budinski, Askeland and Phulé, and Shackelford. Professor Ashby's books offer an extra level of integrated learning by including student exercises that use the EduPack software.

Teaching Resources Website

Over 200 individual resources can now be found in our expanded and updated set of teaching resources, of which more than 50 have been contributed by academic in the community, from 8 different countries.

- >80 Powerpoint lectures in 4 languages
- >30 sets of exercises with worked solutions
- Interactive case studies
- White papers and Teach Yourself booklets
- Getting Started guides
- Materials and process selection charts



Training and support

We can provide expert advice and technical support. Regular web seminars help to keep you up to date on the latest news and developments. Optional web-based training helps you to develop your EduPack use. Or attend a symposium or short course.

Licensing to support your needs

A range of license options exist for CES EduPack—from supporting individual courses, or providing a campus-wide resource, to encouraging self-teaching and project work by licensing the software on students' own PCs.

Further information

Get detailed product information

See what's new in 2012

Download an information pack

Arrange a demonstration

Find out about events

www.grantadesign.com/education/

GRANTA
MATERIAL INSPIRATION

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