Connexions Consortium

What is Connexions?

Connexions is an open source platform and open access repository for open education resources, enabling the creation, sharing, modification, and vetting of open educational material accessible to anyone, anywhere, anytime via the World Wide Web. Since 1999, Connexions has pioneered digital education. Connexions global knowledge ecosystem where anyone can create materials is free of charge. Connexions modular interactive information is in use by universities, community colleges, primary and secondary schools and life long learners worldwide. Connexions materials are available in many languages including English, Chinese, Spanish, Japanese, Vietnamese, Italian, French, Portuguese and Thai. Through its partnership with innovative publisher QOOP, Connexions is part of an exciting new distribution system that allows for print on demand and accelerates the delivery of educational materials into classrooms worldwide.
Connexions: Create Globally, Educate Locally

What is the Connexions Consortium?

The Connexions Consortium (CNXCNS) is a group of organizations, including the world's foremost leaders in education, who work together to advance open source educational technology and open access educational content. Members join CNXCNS to work and exchange ideas with other members. More information about the consortium can be found at http://cnxconsortium.org.

Who Can Join the Connexions Consortium?

Connexions Consortium (CNXCNS) Membership is available to all organizations and individuals. If your organization is investing significant resources into educational technologies — either by developing educational content, using educational technologies as an enabling medium for your work, conducting research on education, and/or developing educational products — then your organization should be a CNXCNS Member. Adoption of the Connexions platform (Rhaptos) and use of the Connexions repository in the field of education continue to grow. Those who participate in the work of the Consortium have a unique opportunity to shape the Connexions platform and to leverage it to create new markets, expand existing markets, and participate directly in the revolution that continues to change the way the world of education works.
Member Benefits

-- The opportunity to interact and work directly with the leading companies, universities, schools, curriculum developers, organizations, and individuals in the digital education world;
-- Right to submit proposals to be considered for future Consortium work;
-- The ability to provide strategic direction to the Consortium through review of Connexions proposal submissions and operational policies;
-- Participation in CNXCNS Working Groups, where specifications and guidelines are developed, and in CNXCNS Interest Groups, where discussions are conducted;
-- Participation in CNXCNS Workshops, frequently the catalyst for new technical work within the Consortium;
-- Sponsorship and marketing opportunities within the CNXCNS;
-- Access to the ‘Members’ area containing early information on emerging technologies, software, events, forums, news and announcements;
-- Access to Members-only mailing lists, hosting discussions on work underway in the Consortium;
-- Access to the CNXCNS news service. Updates on CNXCNS activities, announcements for meetings, workshops and conferences, the calendar of events, and Team information are sent directly via email to CNXCNS Representatives and posted on the Member site;
-- The right to use the CNXCNS member logo on your Web site and to participate in press releases, often through testimonials.
-- A 10% discount for one member individual at Connexions Conferences.

Tier One Member benefits also include:

-- Tier One members are entitled to 1 vote for the Tier One Seats on the CNXCNS Board
-- Tier One members are entitled to 1 vote for the At-Large Seats on the CNXCNS Board

Tier Two Member benefits also include

-- Tier Two members are entitled to 1 vote for the At-Large Seats on the CNXCNS Board

Membership Tiers and Dues are defined as follows:

Tier One membership

Non-profit organizations over $50,000,000 annual budget (all sources) $10,000
Corporations over $50,000,000 in annual revenue $20,000

Tier Two membership

All others $2,500
Knowledge is a dynamic continuum stretching across disciplines and constantly redefining educational boundaries. Recent technological advancements make it possible to develop and deliver quality, up-to-date educational materials that acknowledge this flow of interrelated concepts. With a community-driven, collaborative approach to creating and refining knowledge, education can be considered from new perspectives that ignite in students a love for learning.

**What is Connexions?**

Connexions is an open source/open content educational project that offers a fresh alternative to current modes of developing and sharing knowledge. In combination with powerful software tools, Connexions gives worldwide learners of any age free access to educational materials that can be readily explored and manipulated to suit individual learning styles. The free software tools also foster the development, manipulation, and continuous refinement of educational material by diverse communities of authors and teachers.

Connexions has been under development at Rice University since 1999 and is attracting the attention of a growing number of educators worldwide. Its hallmarks include:

- A **content commons** of diverse educational materials that span the knowledge continuum, are modularized for easy reuse, and are available free-of-charge to anyone in the world;
- Visualization and navigation of the “connexions” among concepts, courses, and curricula;
- High-quality materials, thanks to an iterative development process and an inherent quality assessment mechanism;
- Rapid, collaborative authoring of the materials by global communities of authors;
- Flexible, dynamic construction of customized courses and curricula, enabled by a coherent format (XML) and delivered in a variety of forms, from Web pages to e-books to paper texts;
- Separation of content and presentation for flexible customization of look and feel; and
- Content MathML for interfacing with advanced mathematical software packages.
Connexions is collaborating with Creative Commons (creativecommons.org) to develop its open-content licenses.

Visit the Connexions website at cnx.org

**Connexions Software Tools**

The Connexions architecture and software tools have been designed to support the development, management, and exploitation of the Content Commons. In a nutshell, the Connexions tools can be introduced using the “factory” analogy in the figure on the opposite page.

A global community of authors continuously converts “raw knowledge” from the continuum into small, self-contained modules of information, the equivalent of a page or two in a textbook. Modules can be imagined as special Web pages with hyperlinks pointing to prerequisites, applications, and supplementary material. Modules are placed in a database repository (the Content Commons) to be used, reused, updated, and adapted. Instructors use a Collection Composer software tool to weave modules into customized collections that can be placed on the web, presented in class, or printed as a paper text. Students and other learners access web collections or the repository directly using special visualization and navigational tools designed to highlight the non-linear “connexions” among concepts both within the same course and across courses and disciplines.

All software tools are free and open source licensed. The result is a coherent system for course development, organization, and delivery that mutually benefits students, instructors, and authors.

**Connexions Content Projects**

In Connexions, content is developed collaboratively by a community of authors under an open content license. All materials in the Content Commons are thus freely available to worldwide communities of authors who can collaboratively create, expand, revise, and maintain them.

This system has a number of advantages: it is cost effective and time efficient, lowers the barrier to entry into the author community and thus fosters diversity of opinion and subject matter, and increases the quality of the resulting materials.

As of March, 2010, the Connexions Content Commons contains more than 16,000 modules and 950 collections. These support one-third of the core undergraduate courses in the Rice Department of Electrical and Computer Engineering (ECE); Rice courses in computer science, bioinformatics, and mathematics; an ECE course at the University of Illinois at Urbana-Champaign; an ECE course at Ohio State University; two ECE courses at Cambridge University; music appreciation, music theory, and botany. Additional contributions have come from Georgia Tech and Polytechnic University. New material is being developed in emerging areas such as nanotechnology, history, and anthropology.

Connexions' major support has come from Rice University, the William and Flora Hewlett Foundation, the Maxfield Foundation, and the National Science Foundation. Connexions has also received support from National Instruments, Open Society Institute, the Hewlett Packard Corporation, Texas Instruments, the Vietnam Education Foundation, and the Class Foundation.

To get involved with Connexions, see the Web site or email cnx@rice.edu

**cnx.org**

Rice University is a private, independent institution dedicated to the advancement of letters, science, and art. It is located just a few miles from downtown Houston, Texas. With about 3,000 undergraduates and 2,100 graduate students, Rice is consistently ranked one of the top universities in the country. A small student/faculty ratio and top quality research program are hallmarks of Rice.

http://www.rice.edu
Galileo’s Telescope
A brief history of Galileo’s telescope, its predecessors, and the “telescope race” it inspired. In a 150 or so years, telescope makers like Galileo started with a collection of eyeglass components, solved several major technical hurdles (and discovered major physical principles in doing so), and ended up with the telescope design we still use today.

Freshman Engineering Problem Solving with MATLAB
This course, originating at Arizona State University at the Polytechnic Campus, is intended to introduce freshman engineering students to problem solving using an m-file environment, such as MATLAB, LabVIEW MathScript, Octave, etc. It is designed for the novice programmer, and covers the most commonly used features of the language.

Collaborative Statistics
Written by faculty at De Anza College in Cupertino, California, this textbook is intended for introductory statistics courses being taken by students at two- and four-year colleges who are majoring in fields other than math or engineering. The book was developed over several years and has been used in regular and honors-level classroom settings and in distance learning classes.
FIND INFORMATION

Our brains are not linear
Information is often presented to us linearly, but the way we learn is most often by making connections between new concepts and things we already know.

Connexions links information together in unique ways that work for individual learners by serving content in two formats:

Modules: small “knowledge atoms”
Collections: groupings of modules

Finding the information you need is a snap.
Go to http://cnx.org/content

Search for content:

Search

Limit to: [ ] Title [ ] Author [ ] Collections
All Subjects

... or ...

1. Browse:
   • Subject
   • Author
   • Popularity
   • Institution
   • All Collections

2. Refine: the parameters of the search

CREATE CONTENT

Authors create and collaborate, making the addition of information into Connexions as easy as 1, 2, 3


2. Create a module from scratch or convert it from a Word document.

3. Publish your work, sharing it with the world.

ENDORSE CONTENT

Trusted sources / experts
Connexions’ content filtering feature, Lens, enables both organizations and individuals to give a stamp of approval to reviewed content in the Connexions repository.
Expert vetting of content allows user-driven quality control on Connexions modules and collections.

Clicking on a lens link (endorsement or affiliation) takes you to a page about the lens and the person or organization that created it. This page also lists other content in the specified lens.

People don’t live in a vacuum
Collaboration helps knowledge grow more quickly. Connexions promotes communication between content creators, advancing the possibilities for new ideas from which we all benefit.

To start creating, search for modules/collections or for more information, go to http://cnx.org