

EDUTOOLS (www.edutools.org) “Course Management System” Features and Criteria



Communication Tools		
Discussion Forum	Discussion forum is a threaded online text conversation between participants.	<ul style="list-style-type: none">• Students can enable or disable posts to be sent to their email.• Students can receive posts by email as daily digests of subject lines or whole posts.• Students can subscribe to forum RSS feeds.• A spell-checker is available for student and instructor responses.
Discussion Management	Discussion Management includes all of the accessing and scheduling associated with running a discussion forum.	<ul style="list-style-type: none">• Instructors can allow students to create discussion groups.• Instructors can set up moderated discussions where all posts are screened.• Posts may be peer reviewed by other students.• Instructors can view statistical summaries of discussions displaying participation which can be used to generate grades.• Discussions can be shared across courses, departments, or any institutional unit.
File Exchange	File exchange tools allow learners to upload files from their local computers and share these files with instructors or other students in an online course. Note: File attachments to messages are part of Internal Email and Discussion Forums.	<ul style="list-style-type: none">• Students can submit assignments using drop boxes.• Students can share the contents of their personal folders with other students.• Administrators can define disk space limitations for each user.
Internal Email	Internal email is electronic mail that can be read or sent from inside an online course.	<ul style="list-style-type: none">• Students can use the built-in email functionality to email individuals or groups.• Students can use a searchable address book.• Instructors can email the entire class at once at a single address or alias.• Students can elect to forward their mail to an external address.
Online Journal/Notes	Online Notes/Journal enable students to make notes in a personal or private journal. Students can share personal journal entries	<ul style="list-style-type: none">• Students can attach notes to any page.• Students can combine their notes with the course content to create a printable study guide.



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	with their instructor or other students but cannot share private journal entries.	
Real-time Chat	Real-time chat is a conversation between people over the Internet that involves exchanging messages back and forth at virtually the same time.	<ul style="list-style-type: none">• The chat tool supports a limited number of simultaneous rooms.• The chat tool supports unlimited simultaneous group discussions.• Students can create new rooms.• Instructors may moderate chats and suspend students from the chat rooms.• The chat tool supports a structured way for students to ask questions and instructors to provide answers.• The system creates archive logs for all chat rooms.
Whiteboard	Whiteboard tools include an electronic version of a dry-erase board used by instructors and learners in a virtual classroom (also called a smartboard or electronic whiteboard) and other synchronous services such as application sharing, group browsing, and chatting.	<ul style="list-style-type: none">• The whiteboard supports image and PowerPoint uploading.• The whiteboard supports mathematical symbols.• The software supports graphing, polling, and instructor moderation.• The software supports group web browsing.• The software supports application desktop sharing.• The software can archive a recording of whiteboard sessions for future viewing.• The software supports two-way voice chat.
Productivity Tools		
Bookmarks	Bookmarks allow students to easily return to important pages within their course or outside their course on the web. In some cases bookmarks are for an individual student's private use, and in others can be shared with an instructor or amongst a group.	<ul style="list-style-type: none">• Students can share their bookmarks.• Students can create bookmarks in a private folder.• Students can bookmark any content material in a course.
Calendar/Progress Review	Calendar/Progress Review tools enable students to document their plans for a course and the associated assignments in a	<ul style="list-style-type: none">• Instructors and students can post events in the online course calendar.• Instructors can post announcements to a course



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	course.	<ul style="list-style-type: none"> announcement page. Students have a personal home page that lists all courses in which the student is enrolled, new email and all course and system-wide events from their personal calendar. Students can view their grades on completed assignments, total points possible, course grade, and compare their grades against the class performance. Students can subscribe to RSS feeds to be notified of changes to materials.
Searching Within Course	Searching within a course is a tool that allows users to find course material based on key words.	<ul style="list-style-type: none"> Students can search all course content. Students can search all discussion threads. Students can search chat or virtual classroom session recordings.
Work Offline/Synchronize	Work offline/synchronize is a set of tools that enable students to work offline in their online course and for their work to be synchronized into the course the next time they log-in. Sometimes students can download course content to their local computers and work offline.	<ul style="list-style-type: none"> Students can compile and download the content for an entire course into a format that can be printed or stored locally. Instructors can publish course content on a CD-ROM that can be linked to dynamically from within the online course or viewed offline. Students can download course content and discussion group content with a PDA.
Orientation/Help	Orientation/Help tools are designed to help students learn how to use the course management system. Typically, these tools are self-paced tutorials, user manuals, and email or telephone helpdesk support.	<ul style="list-style-type: none"> Students can access context sensitive help for any tool. The system includes online tutorials for students that help students learn how to use the system.
Student Involvement Tools		
Group Work	Group Work is the capacity to organize a class into groups and provide group work space that enables the instructor to assign specific tasks or projects.	<ul style="list-style-type: none"> Instructors can assign students to groups. The system can randomly create groups of a certain size or a set number of groups. Students can self-select groups. Each group can have its own discussion forum.



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		<ul style="list-style-type: none"> • Each group can have its own chat or whiteboard. • Each group can be given group-specific assignments or activities. • Groups may be private or instructors can monitor groups.
Community Networking	Community Networking tools allow students to create social ties, study groups, clubs, or collaborative teams without instructor intervention.	<ul style="list-style-type: none"> • Students can create online clubs, interest, and study groups at the system level. • Students from different courses can interact in system-wide chat rooms or discussion forums.
Student Portfolios	Student Portfolios are areas where students can showcase their work in a course, display their personal photo, and list demographic information.	<ul style="list-style-type: none"> • Students can create a personal home page in each course. • Students can use their personal home page to selectively display their course work. • Students can export their personal home page.
Administration Tools		
Authentication	Authentication is a procedure that works like a lock and key by providing access to software by a user who enters the appropriate user name (login) and password. Authentication also refers to the procedure by which user names and passwords are created and maintained.	<ul style="list-style-type: none"> • Administrators can allow guest access to all courses. • The system can authenticate against an external LDAP server. • The system can authenticate using the Kerberos protocol. • The system supports Shibboleth. • The system supports the Central Authentication Service (CAS). • The system can authenticate against IMAP, POP3 or secure NNTP. • Administrators can set up fail-through authentication against a secondary source (e.g. the system's own database) in the event that the primary source (e.g. LDAP server) fails. • The system can support multiple organizational units and virtual hosts within a server configuration.
Course Authorization	Course authorization tools are used to assign specific access privileges to course content and tools based on specific user roles, e.g. students, instructors, teaching assistants. For example, students can view pages and instructors can author pages.	<ul style="list-style-type: none"> • The system supports restricting access based on roles and roles can also be customized by the service provider. • Administrators can create an unlimited number of custom organizational units and roles with specific access privileges to course content and tools. • Administrators can distribute the permissions and roles



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		<p>across multiple institutions or departments hosted in the server environment.</p> <ul style="list-style-type: none"> • Instructors or students may be assigned different roles in different courses.
Registration Integration	<p>Registration tools are used to add students to and drop students from an online course. Administrators and/or instructors use registration tools but students also use them when self-registration is available. Students can also be added to or dropped from the course.</p>	<ul style="list-style-type: none"> • Instructors can add students to their courses manually or allow students to self-register. • Administrators can batch add students to the system using a delimited text file. • Administrators can transfer student information bidirectionally between the system and an SIS using delimited text files. • Administrators can transfer student information bidirectionally between the system and an SIS using IMS Enterprise Specification v1.1 XML files via web services. • The software supports data interchange with student information systems through an event-driven API. • The software supports integration with SCT Banner, SCT Luminis, Datatel, PeopleSoft 8 or customized integration with other SIS or portal systems. • The software is compliant with the IMS Enterprise Specification for Student Data.
Hosted Services	<p>Hosted Services means that the product provider offers the course management system on a server at their location so the institution does not provide any hardware.</p>	<ul style="list-style-type: none"> • The product provider offers a hosted solution. • The product provider offers only a hosted solution. • Hosting and support services from Commercial Affiliates.
Course Delivery Tools		
Test Types	<p>Test types indicate which types of questions the software supports.</p>	<ul style="list-style-type: none"> • Multiple choice • Multiple answer • Matching • Ordering • Jumbled sentence • Calculated



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<p>Automated Testing Management</p>	<p>Automated testing management includes the control of when and where tests may be taken and under what conditions.</p>	<ul style="list-style-type: none"> • Fill-in the blank • Short answer • Survey questions • Essay • Questions can contain other media elements (images, videos, audio) • Custom question types can be defined. • The system can randomize the questions and answers. • Instructors can create self-assessments. • Instructors can set a time limit on a test. • Instructors can permit multiple attempts. • The students are allowed to review past attempts of a quiz. • The system supports a MathML editor for the inclusion of mathematical formulas in both questions and answers. • Instructors can specify whether correct results are shown as feedback. • The system supports proctored tests. • The system supports Remote Quiz Protocol which allows questions to be rendered and scored externally to the system via standards-based web services.
<p>Automated Testing Support</p>	<p>Automated testing support includes system services for importing and exporting tests and test banks as well as statistical analysis of test results.</p>	<ul style="list-style-type: none"> • Instructors can create personal test banks. • Instructors can create system wide test banks. • Questions can be imported from external test banks that support QTI. • The system provides test analysis data.
<p>Online Marking Tools</p>	<p>Online marking tools enable instructors and assistants to evaluate and mark student work while online.</p>	<ul style="list-style-type: none"> • Instructors can choose to mark each student on all questions or to mark each question on all students. • Instructors can choose to evaluate student responses anonymously. • Instructors can enable students to rate and comment on submissions of other students.
<p>Online Gradebook</p>	<p>Online gradebook includes supports for</p>	<ul style="list-style-type: none"> • When an instructor adds an assignment to the course, the



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	keeping track of student progress and work online in support of assigning course grades.	<ul style="list-style-type: none">software automatically adds it to the gradebook.Instructors can add grades for offline assignments.Instructors can add details to the gradebook in custom columns.Instructors can export the scores in the gradebook to an external spreadsheet.Instructors can create a course grading scale that can employ either percents, letter grades, or pass/fail metrics.
Course Management	Course management tools allow instructors to control the progression of an online class through the course material.	<ul style="list-style-type: none">Instructors can selectively release assignments, assessments, and announcements based on specific start and stop dates.Instructors can release materials based on a single criteria (date, grade, etc.) or instructors can use Boolean expressions to identify multiple selective release criteria.Instructors can set up specific course content that is released on a specific date and must be completed by students before they continue with the course.Instructors can link discussions to specific dates or course events.Instructors can personalize access to specific course materials based on group membership.Instructors can personalize access to specific course materials based on previous course activity.Instructors can personalize access to specific course materials based on student performance.
Student Tracking	Student Tracking is the ability to track the usage of course materials by students, and to perform additional analysis and reporting both of aggregate and individual usage.	<ul style="list-style-type: none">Instructors can track the frequency and duration of student access to individual course components.Instructors can get reports showing the time and date and frequency students as an aggregated group accessed course content.Instructors can get reports showing the number of times, time, date, frequency and IP address of each student who accessed course content, discussion forums, course





assessments, and assignments.

- Instructors can review the navigation record of each student.
- Usage statistics can be aggregated across courses or across the institution.

Content Development Tools

<p>Accessibility Compliance</p>	<p>Accessibility compliance means meeting the standards that allow people with disabilities to access information online. For example, the blind use a device called a screen reader to read the screen but Web pages need to be designed so that screen readers can navigate it easily.</p>	<ul style="list-style-type: none"> • The product provider self-reports that the software complies with Section 508 of the US Rehabilitation Act. • The product provider self-reports that the software complies with the WAI WCAG 1.0 Level A guidelines. • The product provider self-reports that the software complies with the WAI WCAG 1.0 AA guidelines. • The product provider self-reports that the software complies with the WAI WCAG 1.0 AAA guidelines.
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<p>Content Sharing/Reuse</p>	<p>The product provider self-reports that the software complies with the WAI WCAG 1.0 AAA guidelines.</p>	<ul style="list-style-type: none"> • Instructors can share content with other instructors and students through a central learning objects repository. • The repository can be system-wide or for individual organizational units. • Tools are available to enable version tracking and linking to specific versions as well as the creation and management of workflows for collaborative content creation and review. • The repository supports IEEE LOM and metadata application profiles such as, Dublin Core, Cancore, and custom profiles. • For any content in the repository, users can view reports displaying every course in the system that is currently using the selected item.
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<p>Course Templates</p>	<p>Course templates are tools that help instructors create the initial structure for an online course.</p>	<ul style="list-style-type: none"> • The software provides support for template-based course creation. • The system provides course design wizards that provide step-by-step guides that take faculty and course designers through the completion of common course tasks, such as setting up the course homepage, syllabus, organizer pages, content
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		<p>modules, discussion.</p> <ul style="list-style-type: none">• Course content may be uploaded through WebDAV.• Course templates may contain selective release criteria and custom gradebook columns that persist with each new course instance.• The system allows administrators to use an existing course or a pre-defined template as a basis for a new course.
Customized Look and Feel	Customized Look and Feel is the ability to change the graphics and how a course looks. This also includes the ability to institutionally brand courses.	<ul style="list-style-type: none">• The system provides default course look and feel templates.• Instructors can change the navigation icons and color schemes for a course.• Instructors can change the order and name of menu items for a course.• Institutions can create their own look and feel templates across the entire system, including their own institutional logos, headers, and footers.• The system can support multiple institutions, departments, schools or other organizational units on a single installation where each unit can apply its own look and feel templates as well as institutional images, headers and footers.
Instructional Design Tools	Instructional design tools help instructors creating learning sequences, for example, with lesson templates or wizards.	<ul style="list-style-type: none">• Instructors can organize learning objects, course tools, and content into learning sequences that are reusable.• Instructors can create linear learning sequences organized hierarchically by course, lesson, and topic.• Instructors can reuse courses as templates for future lessons.
Instructional Standards Compliance	Instructional standards compliance concerns how well a product conforms to standards for sharing instructional materials with other online learning systems and other factors that may affect the decision whether to switch from this product to another.	<ul style="list-style-type: none">• AICC• IMS Content Packaging 1.1.3• IMS Content Packaging 1.1.4• IMS QTI 1.2.1• IMS QTI 2.0• IMS Enterprise 1.1• IMS Metadata 1.2.2• IMS Metadata 1.3



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- Microsoft LRN
- SCORM 1.2
- SCORM 1.3

Hardware/Software

Client Browser Required	Client Browser Required is the type and version number of the Web browser (e.g. Internet Explorer 3.0, Netscape 4.0) that works effectively with the course management system.	Open Text Description
Database Requirements	Database Requirements are technical specifications for the database management software (e.g. Oracle or SQL) required by the course management system.	<ul style="list-style-type: none"> • The system supports Oracle. • The system supports MS SQL Server. • The system supports MySQL. • The system supports PostgreSQL. • The application requires only one database and can coexist with tables from other applications.
UNIX Server	Unix Server means the course management system runs on a server using some variant of the Unix operating system. The Unix Server feature includes general information about hardware requirements such as disk space, memory (RAM), and CPU speed and model.	<ul style="list-style-type: none"> • A Unix version is available.
Windows Server	Windows Server means the course management system runs on a server that uses some version of the Microsoft Windows operating system.	<ul style="list-style-type: none"> • A Windows version is available.

Company Details/Licensing

Company Profile	The company profile includes public information about the company or organization that provides the course management software.	Open Text Description
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Costs / Licensing	Costs include information on licenses and other startup expenses.	Open Text Description
Open Source	Open Source means the software is delivered with the source code and the license agreement gives the licensee the right to modify and redistribute the software.	<ul style="list-style-type: none">• The software is distributed under one of the OSI-approved licenses.
Optional Extras	Optional extras are features or extras added to the product that may or may not add to the cost.	Open Text Description

