Product Name	Moodle 1.5.2	Sakai 2.0
Developer Name	**Moodle.com**	**Sakai Project**
Communication Tools		
Discussion Forums	The discussion tool supports a social constructionist pedagogy model. Discussions can be viewed by date, by thread, by author. Instructors can split discussion branches from the main discussion into a new discussion. Instructors can determine the level of involvement (read, write, or post anonymously) for students. Posts can include attachments, an image or URL. The discussion tool includes a formatting text editor. Posts may be peer reviewed by other students. Students may receive posts to the dicussion forums as daily digests of subject lines or whole posts as email. Students can subscribe to forum RSS feeds.	Discussions can be viewed by category and thread. Posts can include attachments and URLs. Posts can be either plain text, formatted text, or html. Instructors can determine the level of involvement by setting the permissions (read, write, delete, etc.) for student posts. Discussion threads are expandable and collapsible to view an entire conversation on one screen.
File Exchange	Students can submit assignments using drop boxes.	Students have a private folder into which they can upload and download files. Students can submit assignments using drop boxes. Students and instructors can edit their text files in their folder using a browser. Instructors can upload files to the personal folder of a student.
Internal Email	Students must have an external Internet email address.	Students and instructors must have an external Internet email address. Instructors can email the entire class through a course email alias which is then archived in the system. Students can set preferences on when to be notified through this list, and this can be overriden for important messages by the instructor.
Online Journal/Notes		
Real-time Chat	The chat tool supports images. The system creates archive logs for all chat rooms. Instructors can view chat logs and share these with students. Instructors can schedule chats using the course calendar. Students can see who else is online within their course and send them an instant message.	There is a basic chat tool. Users can create new rooms. The system creates archive logs. Site participants can see who else is online within their course.
Video Services		
Whiteboard		
Productivity Tools		
Bookmarks		
Orientation/Help	Students can access context sensitive help.	The system includes an overview of features, and students can access context sensitive help for each of the major tools. Students can use keywords to search the online help.
Searching Within Course	Students can search all discussion threads in their course and all glossary entries.	Students can search all discussion threads and help documentation.

Calendar/Progress Review	Students can view their completed and pending course readings and activities. Students can view their grades on completed assignments. RSS feeds are available for a number of resources that can notify people using aggregators of changes to materials.	Students can keep track of all their assignments, deadlines, and due dates in their personal online calendars. Instructors can post course-related events, assignments, and announcements in the course calendar. Students can use the calendar to store private events. All students have a personal home page that lists all courses in which the student is enrolled and all course and system-wide events from their personal calendars. Students can view their grades on completed assignments, total points possible, overall course grade, and compare their grades against the overall class performance.
Work Offline/Synchronize		
Student Involvement Tools		
Groupwork	Instructors can assign students to groups or the system can randomly create groups. Groups can either be defined at the course level and apply across all activities that support them, or at the individual activity level. In addition, the system supports a workshop module aimed specifically at peer review of student work.	The software allows instructors or students to create groups through the use of distinct 'project' sites, separate from the main course site. Each project site can have its own shared file exchange, discussion tool, calendar, announcements, chat, and group email list.
Self-assessment	Instructors can create timed or un-timed self-assessments that students can take multiple times. The system automatically scores multiple choice, true/false, and short answer type questions and can display instructor-created feedback, explanations and links to relevant course material.	Instructors can create timed or un-timed self-assessments that allow multiple submissions. The system automatically scores multiple-choice, true/false, matching, and fill-in the blank questions and can display instructor-created feedback, explanations and links to relevant course material.
Student Community Building		The system supports the ability to allow users to create project sites where they can collaborate. Project sites include a calendar, announcements, a resources folder to share documents, email list, chat, and a discussion board.
Student Portfolios	Students can create a personal home page. Students' personal home pages may include a list of all discussion posts they have submitted, their photo, and personal information.	OSP, an open source portfolio tool, is available for Sakai 1.5.1. OSP will be available for Sakai 2.0 in the summer of 2005. Additionally, students can create a personal home page. Personal home pages may include their photo, personal information, and links to websites.
Administration Tools		
Authentication	The system uses basic username and password authentication. The system can authenticate against a variety of sources, including external databases, LDAP directory servers, IMAP, POP3, secure NNTP and First Class servers, and Unix users through PAM. The system also supports Shibboleth and the Central Authentication Service (CAS).	Administrators can protect access to individual courses with a username and password. The system can also authenticate against an external LDAP server or the Kerberos protocol. Users can maintain their own passwords. The system can support multiple organizational units and virtual hosts within a server configuration.

Course Authorization	The software provides tools for Administrators to assign access privileges to different group roles: Administrators, Instructors, Students and Guests. Group role privileges can be further defined into subgroup privileges. Instructors or students may be assigned different roles in different courses. The system can access authorization information stored in other external directory services, including payment gateways.	Administrators can create an unlimited number of custom organizational units and roles with specific access privileges to course content and tools. Instructors or students may be assigned different roles in different courses and group contexts. Administrators can distribute the permissions and roles across multiple institutions or departments hosted in the server environment.
Registration Integration	Instructors can batch add students to a course using a delimited text file or students can self-register. The software supports integration with external information systems through an event-driven API or through a tool that is based on scheduled system exports.	Students can self-register. Administrators can batch add students to the system and courses using providers or scripts.
Hosted Services	The product provider and partner companies offer hosted systems that include: managed software installation, service level agreements on a network of fault-tolerant Unix servers in a secure facility with environmental control, redundant Tier 1 network connections and power, 10Gb bandwidth per month and nightly backups. Hosting contracts are fixed per month and allow unlimited courses.	Institutions and other organizations can purchase hosting and support services from a number of Sakai Commercial Affiliates including Embanet, which provides daily and offsite tape backups, system clustering, managed bandwidth usage, and multiple Internet service providers to provide redundant fail-over capabilities.
Course Delivery Tools		
Course Management	Instructors can link discussions to specific dates or course events. The system can synchronize course dates defined by the institutional calendar.	Instructors can selectively release assignments, assessments, and announcements based on specific start and stop dates.
Instructor Helpdesk	Instructors can access the online instructor manual, context sensitive help, and an instructor support community hosted on the product provider’s site.	Instructors can access the system's help which provides context sensitive help. A knowledge-base and user support communities are also evolving within the wider open source community. Institutions can link to their campus help desk within the help tool and direct users to technical and other user support services.

Online Grading Tools	Instructors can mark assignments and all assessments not automatically scored online. Instructors can assign partial credit for certain answers. Instructors can add the grades for offline assignments to the online gradebook. Instructors can view grades in the gradebook by assignment, by student, and for all students on all assignments. Instructors can export a comma-delimited version of the gradebook (or a real .xls spreadsheet) for use in an external spreadsheet program. Instructors can provide feedback on all assignments through links to the relevant course content, and through annotations. Instructors can search the gradebook to find all students who meet a specific performance criteria, mark, or status such as exam completion. Instructors can create a course grading scale that can employ either percentages, letter grades or pass/fail metrics. When an instructor adds an assignment to the course, the software automatically adds it to the gradebook. Instructors can delegate the responsibility for grading assignments.	Instructors can mark assignments and short answer/essay tests online. Instructors can add the grades for offline assessments to the online gradebook. Instructors can view grades in the gradebook by assessment, by student, and for all students on all assessments. Instructors can export the scores of the gradebook to an external spreadsheet. Instructors can manually edit all grades. Instructors can create a course grading scale that can employ either percentages, letter grades or pass/fail metrics. Instructors can create assignments that weigh various amounts of points. The software automatically calculates the overall grade of a student.
Student Tracking	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 get a report that shows number of attempts and time per attempt on each assessment for individual students. Instructors can maintain private notes about each student in a secure area. Instructors can get a report that summarizes individual student performance on assignments. Instructors can set a flag on individual course components to track the frequency with which students access those components. Instructors can monitor students who are currently logged in to the course. Instructors can summarize all discussion posts to date by a student.	

Automated Testing and Scoring	Instructors can create automatically scored true/false, multiple choice, multiple answer, cloze, matching, numerical, calculated and short answer questions. Questions can contain images , video, other media files, and detailed feedback on each answer. Instructors can create mathematical equations. Custom question types can also be defined. Instructors can create personal, course specific or system wide test banks from questions can be chosen to create tests for students. Instructors can import questions from existing test banks. The system can randomize the questions in a test and the alternatives for multiple choice questions. Instructors can require a special password and set times for when students can or must access tests. Instructors can set a time limit on a test. Instructors can limit attempts to specific IP addresses. Instructors can differentially weight tests and create grading rules. Instructors can permit multiple attempts, and whether correct results are shown. Instructors can override the automated scoring. Instructors can also create survey questions. The system provides test analysis data for individual test items. The system also supports the Remote Quiz Protocol which allows questions to be rendered and scored externally to the system via	Instructors can create automatically scored true/false, multiple-choice, multiple-answer, matching, fill-in the blank, and short answer/essay questions. Questions can contain images and audio files. Instructors can create personal test banks. Questions can be created from test banks in the system or can be imported from external test banks that support QTI. The system can randomize test questions and the alternatives for multiple choice questions. Instructors can set times for when students can access tests. Instructors can set a time limit on a test. Instructors can permit multiple attempts and specify whether correct results are shown. Instructors can override the automated scoring. Instructors can also create survey questions. Instructors can differentially weight test questions.
Curriculum Design		
Accessibility Compliance	To comply with Section 508 of the US Rehabilitation Act, the software implements the following features: alt tags on all system images, and data tables that are optimized for use with screen readers. The system can also filter all user supplied inputs through W3C Tidy program to convert it to valid XHTML code.	To enable accessibility, the software implements the following features: alt tags, table headings, and form labels.
Course Templates	The software provides three default course templates: activities arranged by week, activities arranged by topic, or a discussion-focussed social format. Instructors can create new course or content templates. Instructors can use templates to create discussion forums, links, course content, and resources, and these templates include a WYSIWYG content editor with spell-checking.	Instructors can categorize course content as announcements, calendar entries, discussion forums, syllabus information, assessments/assignments, and resources.
Curriculum Management		
Customized Look and Feel	The system provides 10 default course look and feel templates. Institutions can create their own look and feel templates across the entire system. Institutions can apply their own institutional images, headers and footers across all courses. Instructors can change the the navigation icons, color schemes, and order and name of menu items for a course.	The system can support multiple institutions, departments, schools or other organizational units on a single installation. Each unit can apply its own look and feel templates as well as institutional images, headers and footers. Instructors can customize the left navigation menu of their sites by enabling or disabling tools, as desired.

Instructional Standards Compliance	The software can import course content that is SCORM 1.2 or AICC compliant, and can export quiz content in IMS QTI 2.0 format. The system includes tools to facilitate the migration of course content between different versions of the software. The provider company supports migration from the following course management systems: BlackBoard.	Using the Melete open source lesson building tool, the system can export course content using the IMS Content Packaging standard. The system can import assessment content in the IMS QTI 1.2 format.
Instructional Design Tools	Instructors can create both linear and nonlinear learning sequences using a content library. Instructors can organize larning objects into learning sequences. The software supports constructivist and problem-based learning approaches. Instructors can create relationships between assignments and required resources which can then serve as templates for future lessons.	Instructors can create linear learning sequences organized hierarchically by course, lesson, and topic.
Content Sharing/Reuse		
Hardware/Software		
Client Browser Required	The software supports any browser supporting HTML 3 or higher and uses cascading style sheets (CSS) in browsers that support CSS.	The software supports Internet Explorer 5.5+, Netscape 7.1+, and Mozilla Firefox for Windows, and Netscape 7.1+ or Mozilla Firefox on the Apple OS. Some functions in Sakai will not work well or will not work at all in Safari or Internet Explorer for the Mac. Javascript must be enabled.
Database Requirements	The system supports either MySQL or PostgreSQL databases. The system requires only one database and can coexist with tables from other applications.	The system supports Oracle 9i or later, or MySQL 4.1+. The system requires only one database and can coexist with tables from other applications.
Server Software	The software requires PHP 4.1.0 or later, MySQL(or PostgreSQL), and a web server. The software was developed using the Apache web server. The software includes: administration reports through a web browser, course archive and restore, installation setup wizard that includes database creation, backup and archiving, tools to backup and purge either course content or student data for individual courses and groups, rotated logs, notification services, a display of the last sessions in the system that can be filtered by either IP address or date, site configuration. Typically, local administrators install the software. The product provider offers for-fee installation consultation.	The software is intended to work on a wide range of hardware and operating systems that support Java. Users are encouraged to stick with the common environment used by the developers. The software requires Tomcat 5.5.9 or later, and the Java 2 SDK.
UNIX Server	The software is available for most variants of Linux or Unix.	The software is likely deployable on any Unix variant with Java support, but Linux and Applex OS X are the typical environments used by the developers. Suggested typical production environment would be an Intel-based Linux with 4GB of RAM.

Windows Server	The software is available for a variety of Windows web servers.	The software is likely deployable on any Windows variant with Java support, but XP is the typical environments used by the developers. Suggested typical production environment would be a Windows Server 2003 with 4GB of RAM.
Pricing/Licensing		
Company Profile	Moodle.org is an open source community launched in 2001 that has grown out of a PhD research project by Martin Dougiamas. Version 1.0 was released on August 20, 2002. Moodle.com is a company launched in 2003 that sponsors Moodle development and provides commercial support, hosting, custom development and consulting. The Moodle Partners are a network of companies that work with Moodle.com to provide services around the world.	The Sakai Project is a coordinated higher education open source community project launched in 2003. It builds on previous work done by Stanford, Michigan, Indiana and other partners, and is built within the uPortal framework. The project has been funded through 2005 by the Mellon foundation as well as contributions from the Hewlett foundation and the core partners themselves. The project has also created the Sakai Educational Partner's Program (SEPP), a for-fee community that is open to educational institutions and for which they receive early access to code releases, documentation, project staff and exchange of partner tools.
Costs	The software is free and distributed under the GNU Public License.	The software is free and distributed under the Educational Community License Version 1.0.
Open Source	The software is distributed under the terms of the GNU General Public License.	The software is distributed under the Educational Community License Version 1.0.
Optional Extras	More than 45 language translations are available as plug-in packs. Each course can have its own glossary which can be maintained by the instructor or collaboratively by the students. Terms in the glossary that appear in the course can be auto-linked back to the glossary. The system has a module which accepts payments for course registrations via PayPal. The system supports the creation of Wikis. The system can display RSS feeds.	For any content posted to a course or in the personal areas, a copyright statement can be added and the instructor can decide whether it needs to be displayed and agreed to each time the content is displayed. The system can display RSS feeds. The systems Web Content feature allows site owners to choose a website to display within the main frame, and to customize the menu item which links to it. Sakai is an active participant in the Tools Interoperability Profile, an effort to create a standard by which third-party tools can interoperate with a variety of course management systems. In addition, Sakai promotes the notion of ''Sakai Tools'' which, while developed separately from the main project, can be easily installed and work within the framework. Examples include the Open Source Portfolio tool and the Melete lesson builder.
Software Version	The current software version number is 1.5.2.	The software is version 2.0