

What Is WebAssign?

WebAssign is a powerful online assessment system that lets you distribute, collect, grade, and record assignments quickly, accurately, and automatically over the Internet. WebAssign eliminates the monotony of grading papers and recording scores, leaving more free time to meet with students and prepare class presentations. Students and teachers can access WebAssign from any computer with a connection to the Internet, so learning can take place anywhere, anytime.

"Again, this is the best tool ever to assist and motivate students in learning chemistry, math and physics. I am a true believer. And you keep improving it so much each year." Carolyn Morse, UNC Chapel Hill

How Does WebAssign Benefit Teachers?

WebAssign changes the way you think about homework. Its instant grading and reporting features take the drudgery out of frequent assignments and transform homework from a time trap into a powerful evaluation tool. You will have more time for guidance, more opportunity for directed discussion, more energy for interactive exploration, more freedom to teach the way you want to teach.

"I teach at a community college with no grading help. Without WebAssign, I simply would not be collecting homework, and the students would ultimately suffer." Independent survey by Iota Solutions

How Does WebAssign Benefit Students?

WebAssign transforms the way students learn. With instant feedback, students know immediately whether or not their answers are correct. With multiple submissions, your students can focus on their mistakes and gain confidence as they learn each topic. Now all students have an equal opportunity to master the material in your course. More frequent assignments offer a greater opportunity to practice skills. They come into your classroom well prepared and ready to learn. Students consistently report that they enjoy using WebAssign, find the immediate feedback helpful, have few problems using the service, and recommend that assignments continue to be offered with WebAssign.

"WebAssign requires students to study every day and not just wait until a weekly assignment or exam. Procrastination is no longer an option for my class." Aaron Titus, High Point U

"WebAssign helps us to do [homework] on a continual basis, which helps me to learn the material, rather than just memorizing it for a short period of time! I love WebAssign!" Student at Linfield College

"You give us exactly what we need to get the job done quickly and correctly. Thanks for the quality." Student at Rochester Institute of Technology

What Are Some of WebAssign's Highlights?

- Pre-coded textbook questions
- Expanding set of powerful tools for creating questions and customizing assignments
- Available 24 hours a day, 7 days a week
- Easy to use
- Scalable from individual classes to school-wide programs
- Complete easy to use GradeBook
- Integration possible with your institution's password server, registration and records, Blackboard, and WebCT
- Excellent support team

"This is the most useful tool in teaching since the advent of the electronic spreadsheet." Independent survey by Iota Solutions

"The Summary Report feature in WebAssign is priceless." Jay Salon, Palmetto HS

"The speed of response to my questions never ceases to amaze me. I'm impressed." Joe Wilson, U of Kentucky

How Do I Use WebAssign?

Once you login to WebAssign you access your own customized view of your classes and assignments. From your ClassView page you are a click away from managing assignments, class announcements, viewing students' progress, communicating one on one or sending everyone a message, and handling student help and extension requests.

"Just so you don't think Web Assign is unappreciated, I should mention that the performance of the Chemistry 161 class last semester was the best I have had in many years. Although it's hard to prove, I feel very strongly that Web Assign played an important role in their good performance." Robert Boikess, Rutgers U

Class Management

When you first join WebAssign, the account manager will send you a username, school code, and initial password with instructions for setting up your first class. Your school code is unique to your school and is used in the login. The simple class creation wizard will help you create your classes. You will be the teacher in charge of the classes or the "primary" teacher. You can add additional instructors who will have the same privileges as you or TAs with limited privileges.

You can create as many classes as you need, or simply add sections to the first class. You can upload a class roster by pasting a tab-delimited file into the roster form, add your students one at a time, or push your roster over from Blackboard or WebCT.

During class creation you can choose to associate your class with one of the WebAssign textbooks. WebAssign has agreements with leading textbook publishers to provide questions and problems from selected textbooks. Teachers who adopt one of these

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textbooks can make assignments using these pre-coded questions. If WebAssign does not support your textbook, just fill out the request form in the Content tab of the WebAssign homepage. We make every effort to help you get the questions you need into the growing database of WebAssign questions. We have over 100 textbooks' end-of-chapter questions ready for immediate use.

"Using problems from the textbook [mine is Tipler *Physics*] is a very important feature. WebAssign has been great for my classes and I continue to find new ways to use it." Independent survey by Iota Solutions

Assignment Management

The heart of WebAssign is assignment management. Whether the assignment is homework, a quiz, a test, or an in class activity, WebAssign makes managing the content, feedback, dates, instructions, scores, and value toward the final grade as easy as possible.

Let's imagine you want to create your first assignment. You would click Create, enter the assignment name, a description of the assignment, choose the questions, and save. That is all there is to it. You can also weight each question, choose how to randomize, and pick the feedback to deliver to your students before the due date and after the due date.

Assignments can be scheduled for any of your classes with a click of the Schedule button. Your assignments are always available to you no matter which class or term you are viewing.

"WebAssign rewards the hard-working student who might not get the answer correct the first time but is willing to keep trying." Dave Corsetti, Broughton HS

Question Management

If you choose to create your own questions, WebAssign has the tools you need. If the textbook you use in your class is one of the WebAssign textbooks, you may never need to visit the Question Editor. You will create your assignments in the Assignment Editor from the prepared questions from your textbook.

However, the powerful tools for creating your own questions are available in the Question Editor. You can start from scratch or duplicate existing questions. You can begin creating your own questions in a matter of minutes.

"I prefer to construct my own problems. WebAssign makes this very easy." Independent survey by Iota Solutions

Answers to questions can be numerical, symbolic or algebraic, multiple choice, multiple answer, fill-in-the blank, essay, image map, file upload, poll, Java, or any combination of these types. Variables, words, phrases, sentences, paragraphs, graphics, sound files, and video files can all be randomized so that many versions of the question are delivered to your students.

"The randomization of numerical inputs prevents students from simply copying answers from their friends, and the instantaneous feedback mechanism broadens the role of homework assignments. Instead of simply providing assessment, they are also tutorial instruments." Pete Knipp, Christopher Newport U

Randomization and many other powerful techniques are achieved with a special tag invented for WebAssign. This tag allows WebAssign to interpret Perl code for mathematical and logical expressions, so you have a sophisticated programming language at your disposal.

Questions can have multiple parts. The first part could be multiple choice, the second part numerical, and the third essay. Teachers can change from one question type to another as many times as they like in one question. Questions can be identified with a name, key words, and subject classification. Every question is identified with the author name and a unique serial number.

"I've used other electronic homework systems, both web-based and non-web-based. WebAssign is by far the most flexible system I've tried. I am especially satisfied with the wide variety of question types, and how easy it is to incorporate a range of difficulty levels in the assignments. I will definitely keep using WebAssign." Brian Gilbert, Linfield College

Score Management

The ScoreView gives you access to a table of scores for all your students and all your assignments. You can drill down to every submission your students make or view a summary of scores with appropriate statistics for each question type. All reports can be displayed on the screen, printed, or downloaded to a file. Typically, teachers access the scores for one assignment for all their students just after the deadline to see if the class is up to date on the material. This feature supports "just in time" teaching. Many use the reports to review the progress of individual students to see if they are keeping up with the class.

"The best thing about WebAssign is finding out which concepts students do not understand by getting a percentage of the choices that were answered." Jay Salon, Palmetto HS

You score essays on the screen either anonymously or with student names appearing on each essay. After grading, the students can view their scores, your comments, and a teacher-provided exemplar.

The ScoreView page also gives you quick access to granting extensions to one or more assignments for one or several students. Warnings appear if the student has viewed the answer key or if there was an additional request for an extension. It is even possible to allow students to request an automatic extension with you deciding on the consequences.

Complete GradeBook

WebAssign includes a complete grade book. All the scores from WebAssign assignments are automatically available to the WebAssign GradeBook, as well as scores you upload. To get you started there is a friendly wizard. During the steps of the wizard you are asked to make basic decisions of how you want your students' final grade calculated. Your assignments are in categories such as homework, quizzes, tests, labs. You can also create your own categories. You decide the weights of the various categories and whether any assignments should be dropped, e.g. the 2 lowest homework scores. You can also decide to upload your own averages for any of the assignment categories. If you would rather use your own method for calculating grades, WebAssign offers a

simply way to upload your grades. Whether or not you or WebAssign calculates the grades, you decide what grades and statistics get posted to the student view. You can view and decide to show your students the class average, minimum and maximum, standard deviation, and a histogram for interim and final grades as well as all assignment scores in WebAssign.

Communication Management

Teachers can turn on a wide selection of tools to promote communications, both between teacher and student, and between student and student. The Communication tools include a Message Board often used for homework forums, Private Messages, a Help Desk, an Extension Request hotline, and an Announcement manager. You can choose to turn any of these tools off. However, if you turn on the Message Board, your students will be able to post questions during their work time and help each other with their difficulties. The Help Desk tool delivers student questions to you in the context of their work. You can see what they have been doing and then give personal help in your response.

"The results of our semester exam showed a measurable difference between those students who used WebAssign and those who did not." Independent survey by Iota Solutions

How Do Your Students Use WebAssign?

Your students will open their browser to the secure login page, <https://www.webassign.net/login.html>

The login includes links to an online student guide and a technical support area with answers to commonly asked questions and a Student Help Request form for asking us questions. We help the students as much as we can about everything except course content. There will also be boxes for their login information. We recommend that you require your students to read the student guide and give them the Intro to WebAssign assignment. The instructions for creating this Intro are in the online User's Manual.

Before they log on for the first time, you will provide them with the following information:

- Their WebAssign username
- Their school's code
- Their initial WebAssign password

Once the student enters the login information, they are shown every class they have that uses WebAssign. To find their assignments in a particular class, students simply click the class link. They can then select the assignment they wish to work on. For each assignment, students can see their current score, the number of submissions they have made and when the assignment is due. Once the due date has passed, an assignment can still be viewed but not submitted.

"Students particularly love the feedback that WebAssign gives them during a test. In truth, all of us have been asked by students during a test to give them feedback to an approach they're taking to a question. WebAssign automates this feedback process and levels the playing field for everyone. You'll be hard-pressed to find any student who doesn't endorse this approach." Lavon Page, NCSU

If students need help on a specific assignment and you have enabled the Help Desk, they can send a Help Desk question. You or your 'tutors' will receive the question inside WebAssign with easy access to their work and can provide assistance as you see fit.

"I really like the way that homework is assigned this semester...I have plenty of time to receive help without staying up really late and pulling my hair out." Student survey

What Does Research Say about WebAssign and Online Assessment?

Web-based assessment and related applications have become a frequent topic in educational research. One paper addressed the significance of using a computer as opposed to a human being in the evaluation process:

"The bottom line of our investigation is that web-based homework leads to neither a significant improvement nor a significant reduction in student learning: All other things being equal, it doesn't make a big difference whether the computer or a human being is wielding the "red pen." Other factors in a course have a much greater impact on student performance than the *method* of collecting homework and delivering feedback. This supports the viewpoint that technology itself does not improve or harm student learning, but rather that the underlying pedagogy is the critical issue."

S. Bonham, R. Beichner, D. Deardorff. "Online Homework: Does It Make a Difference?" *Physics Teacher*, 39, 20 (May 2001).

In another article, the advantages and disadvantages of web-based tools are explored:

"The growth of the Internet, and in particular the World Wide Web, is already influencing the way science is taught and will undoubtedly do so to greater extent in the future. One important facet of this is the development of web-based assessment and testing systems. These systems also provide a valuable new tool to the education research community; a tool that combines the ability of multiple-choice diagnostic tests to handle large numbers of subjects with some of the greater flexibility and additional information that other methods offer.... In this paper, the strengths and weaknesses for education research are discussed, and some suggestions for its use are presented."

S.W. Bonham, A. Titus, R.J. Beichner, L. Martin, "Education Research Using Web-based Assessment Systems," *Journal of Research on Computers in Education* 33, 28 (2000).

Data support the positive effects of technology-based education tools, as this study shows:

"The implementation of Asynchronous Learning Network (ALN) technology in a large on-campus course over several years is reviewed, and recent data concerning both educational and cost effectiveness are presented. Even with higher course standards for success, student performance on examinations has improved, a larger fraction of students achieve the goals of the class, and the proportion of students who excel has increased."

D. A. Kashy, G. Albertelli, E. Kashy, M. Thoennessen, "Teaching with ALN Technology: Benefits and Costs," *Journal of Engineering Education*, 90, 499 (October 2001).

Other studies continue to explore key issues related to the successful implementation of on-line assessment:

"The present study seeks to identify key issues pertinent to assessment of students' performance in Web-based and Web-enhanced coursework. It constitutes a qualitative case study focused on the Educational Leadership department at the Center for Excellence in Education at Northern Arizona University (NAU) in Flagstaff, Arizona."

M. I. Dereshivsky, "A' Is for Assessment: Identifying Online Assessment Practices and Perceptions," *Ed Education at a Distance*, 15 (Jan 2001)
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What Are Teachers Saying About WebAssign?

We receive feedback from teachers on a daily basis. Here's what some of them have said about their experiences with WebAssign:

"Solving homework problems is the main way that students learn physics, engineering, and mathematics, and WebAssign is a very efficient and powerful tool for compelling students to do so." Pete Knipp, Christopher Newport U

"The immediate feedback has been a great benefit to me and to my students. They don't have to wait for me to grade a set of papers to see what they've done right or wrong. It has helped students to develop a sense of math as units rather than page-by-page exercises. It also gives the curious learner a chance to see what is coming next in the unit and ask informed questions about the connections between skills." John Pritchett, Broughton HS

"For the record, I really enjoy using WebAssign in my chemistry classes. I can't imagine now what life would be like without it." Bridget Dibble, Ocean Lakes HS

Just-in-Time Teaching with WebAssign

Assessing student understanding just before the class meets is a powerful technique for fine tuning a lecture. As discussed in *Just-in-Time Teaching* by Gregor Novak and colleagues (Prentice Hall, 1999),

"Just-in-Time Teaching (JITT) is a teaching and learning strategy comprised of two elements: classroom activities that promote active learning and World Wide Web resources that are used to enhance the classroom component. Many industries use JITT methods; they combine high-speed communications and rapid distribution systems to improve efficiency and flexibility.... this makes our classroom activities more efficient and more closely tuned to our students' needs. The essential element is feedback between the web-based and classroom activities."

Many teachers are beginning to use JiTT with WebAssign. A few shared their experiences with us:

"I also use WebAssign to do JITT in my class. I use 'questions' from the end of the chapter as my pre-class assignments. These can be essay type ... or they can be multiple-choice. It depends on the textbook. The advantage to multiple choice is that WebAssign's "Summary" option actually tells you what percent of your class chose which choice [only for multiple-choice questions], so this is a quick way to see what questions were answered correctly and what the most common incorrect answer is. I give my students only one submission for this type of 'assignment,' and I count it for full credit [1/1] as long as they respond." Anne G. Young, Rochester Institute of Technology

"My evaluation? JITT is a very enlightening way to teach. Reading students' written responses helps you to know what they are 'really' thinking. It has other benefits as well; for example, it helps to motivate students to read the book before coming to class. Also, seeing their poorly worded answers (poor grammar, spelling, lack of serious thought) displayed in class can motivate students to give better effort on the next JITT question." Aaron Titus, High Point U

Do You Want to Try WebAssign?

To see what students see when they use WebAssign, go to the WebAssign home page, <http://www.webassign.net>. Click Demo. You will have a choice of a quick demo of a single class with several assignments or an expanded demo with many classes illustrating the way WebAssign can be used with many different disciplines. There is also a demo of the faculty application.

You can also sign up for 6 free weeks of WebAssign. Just click the Free Trial button. We look forward to seeing you online! Give us a call at 800-955-8275 if you have any questions.

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