

Introduction to WeBWork at UTRGV

- Free, editable online assignment system with Blackboard connection.
- Developed by mathematicians at the University of Rochester
- Templates, model courses for many courses.
- Assignments and problems are editable by the instructor.
- Large library of existing problems.

<https://webwork.utrgv.edu> => Instructions for UTRGV Instructors

- Faculty help: Andras Balogh Andras.Balogh@utrgv.edu. Send email if
 - Need a new course
 - Want to list previously used course on the current semester's page. Existing courses are reused.
- GTA helper is announced at the beginning of each semester.
 - GTA can do most of the work for you.
- Several small technical details are easy to miss and forget, similarly to what happens when students learn mathematics.

Pages at <https://webwork.utrgv.edu>

- Current semester's list of courses.
 - This is for convenient instructor access.
 - You must ask for your course to be listed on this page.
 - Make sure to drop the @utrgv.edu part from your login name.
 - UTRGV students should use Blackboard links instead of directly accessing WeBWork! Don't even mention to students the WeBWork website address.
 - Instructor can also access WeBWork through Blackboard once a link has been set up.
- List of **all** current and previously used UTRGV WeBWork courses. Previously created courses are usually reused.
- Instructions for UTRGV Instructors
- Some other pages

Note: Multiple sections by the same instructor use the same WeBWork course. This results in the least amount of work for instructors. The sections can be separated inside the course. More about this later.

Things to Do in Your WeBWork Course

Initial Settings

1. Initially, all or most assignments should be made invisible. You have to edit the homework sets and remove the checkmark from the “Visible” column. This is because at the time of automatic student account creation, all visible sets are automatically assigned to new students. You may end up with students having the whole semester's homework assigned on the first day, which is probably not what you want (or maybe you do want it). Don't forget to make the assignments visible later when you assign them to students.
2. If you had the course before (reusing the course), then students from the previous semester must be deleted in the class list editor. Andras Balogh (WeBWork admin) is in all courses. You can delete me (not recommended because you might need my help at some point, but I can also add myself back if needed).
3. Create the link to your WeBWork course from your Blackboard course. If you have multiple sections, you have to do it from each Blackboard section. Once students click on the link in Blackboard, their account gets created in WeBWork. See below for details.

Later in the Semester

4. Check homework set settings
 - Opening and closing dates of sets.
 - Weight of problems (maybe large weight for harder questions or even 0 weight for review)
 - Number of attempts (0-infinity) (for example: T/F 1 attempt, hard question 10 attempts, easy question 5 attempts)
 - Make the set visible before assigning it to students.
 5. Assign a set to students with accounts already in WeBWork. Otherwise, students get the visible assignments when their account is created. On the help page there is additional video about assigning sets to students.
 6. Repeat steps 4-5.
- Settings can be changed even for individual students and for individual problems.
 - If there are several sections for the same instructor in a single WeBWork course, the sections of students are automatically created in WeBWork, and the different sections can be handled separately. On the help page there is additional video about assigning sets to students.

Bridge between Blackboard and WeBWork

- Student accounts are automatically created in WeBWork when students click on the link in Blackboard for the first time. A student's account is not created until he or she clicks on the link! You might have to check the class list and remind students.

- Section numbers are also recorded, which can be used to separate students in WeBWork.
- WeBWork grades sync to Blackboard every 24 hours.
 - Students occasionally complain that the blackboard display of their WeBWork grade is incorrect.
 - If you let students work in WeBWork until grades are due at the end of the semester, you might not see the updated grade in Blackboard in time.
- Two options for Blackboard links:
 1. **One link:** One overall (cumulative) WeBWork grade in Blackboard. All the assignment grades are bundled together into one grade. This is the default setting in WeBWork that most people use.
 2. **Separate link for each assignment:** This requires more work but can be useful. This is required if you have additional homework in Blackboard that must be combined with WeBWork homework. You can set up a homework folder in Blackboard with many links. One issue in this case is that Blackboard might not count against student assignments that were not attempted, and instructor has to manually zero out those Blackboard grades.

Follow instructions at <https://webwork.utrgv.edu> => Instructions for UTRGV Instructors

Additional Settings to Consider

See <https://webwork.utrgv.edu> => Instructions for UTRGV Instructors

- Enable Reduced Scoring
 - Full credit until reduced scoring (due) Date
 - Reduced credit (of your choice) until closing date (end of semester for example).
 - Zero credit after closing date.
 - Answers can be made available after closing date
 - Check your course setting! For some course templates (Calculus 1) it might be set by default!
- Enable MathQuill to assist with the student answer entry process, for example for submitting square roots \sqrt{x} ; powers $x^{1/2}$ and fractions.
- Enable Course Achievements for gamification (probably not achievement items)
- Send out Blackboard announcements about assignments and their due date.

Creating/Editing Assignments

See <https://webwork.utrgv.edu> => Instructions for UTRGV Instructors

- Library Browser with tens of thousands of questions.

- You can edit/modify local copies of questions; add hints/solutions/video/desmos; change notation; etc. tolerance, precision (google: webwork tolerance)
- Questions are written using PERL/LaTeX
- Program Generating Language (PG)
- Program Generating Markup Language (PGML)
- You are free to edit/modify all templates