

# Webreg: An Online System for Registration and Grade Distribution

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## ABSTRACT

We outline the use of the *Webreg* system for registering for courses, managing homework assignment points, exam registrations and grades.

## Categories and Subject Descriptors

K.3.2 [Computers and Education]: Computer & Information Science Education - *Computer Science Education*

## General Terms

Management

## Keywords

Course administration, registration

## 1. WEBREG

The administration of courses can be quite time-consuming. This is especially the case for the less interesting aspects, such as tracking how many students registered for a given course, lab, seminar or exam, dividing students up into groups, and publishing grades or points for homework assignments and exam results. All of these are in high demand by the students, who expect support for their (legitimate) interest in easy enrollment and quick access to their results.

The final grades for exams are usually published at a time when most students who live away from the university have already left, leading to queries for others to “take a photo of the grades and post it on the web”. This is totally unacceptable for several reasons, not the least being privacy concerns. However, the interest of students to know their grade, without being forced to travel more than one hour only to look at a piece of paper for 2 minutes, is also understandable.

To resolve the problem, we have written a web-based registration tool, not very surprisingly called *Webreg*. The tool is based on MySQL and PHP and makes it easy for educators to add or modify their courses, set the limit of students

who can enroll in the course, and activate or deactivate the registration. Additionally, students can be merged automatically into groups, if this is required by the educator. This is especially useful for the undergraduate exercise groups listed above, each of which has about 20-25 students. It also applies to many labs where students are required to form groups of typically 4 persons.

The tool can be used by educators, tutors, and students. For privacy reasons, each user has to login in first using the CS department login. Educators can create or modify existing courses, create or modify exercise groups, and open or close the registration. They can also enter grades and homework assignment points, although the latter is usually delegated to tutors. When the educator closes the registration, he or she only has to click on the “assignment” link and the groups are generated automatically using a graph optimization algorithm. This generation can also take into account the already assigned exercise slots for other lectures, so that a student who was assigned an exercise on Monday at 10 AM in one lecture will not be assigned to another exercise at the same time slot - provided that both courses use *Webreg*.

Tutors can enter or adjust the points achieved by students in their exercise groups. Typically, tutors will also be active student users of *Webreg*. Educators and tutors can enter the points for homeworks or other assignments. These values are immediately visible to the students - but the points awarded to other students are completely invisible. The same applies to exam grades or other final grades. It is up to the educator how much information he or she wants to publish (e.g., individual points per task versus only the final grade).

Students can register individually for a given course or exam, either individually or as a learning group. They can then select which exercise groups they would prefer to be in, and which they cannot take, for example due to other parallel classes. Students can also see their exercise points and grade after logging in to *Webreg*. The results of other students are inaccessible.

*Webreg* is easily accessible over the Internet by any user, so the need to drive to the university - or take those nasty “grade photos” - is addressed.

*Webreg* currently has 7866 student users, and has managed 50,709 registrations for a total of 393 courses over the last six years. The platform has a total of 91 course administrators.