Teaching Assistant Management System

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The VCU CS department’s undergraduate population is quickly expanding every year. As class sizes grow, student outcomes and retention rates depend on effective course management. Undergraduate teaching assistants (TAs) can be a major resource in courses by helping students individually, grading, and many other tasks. A management system is needed to most effectively utilize TAs and allow courses to function smoothly with efficient course management and communication between faculty and TAs. The needs addressed by the system are a central method for TA recruitment and evaluation, guidelines for TA training and expectations, ensuring that TAs are assigned to the optimal courses near the ideal TA-student ratio, and supervising TA grading for consistency and reliability

Our system consists of the following three components: a data storage system of current, past, and potential TAs, courses and their topics, requirements, and assignments, and TA notes and evaluations, web application containing the application to be a TA, course information, a method for TA applicants evaluation and for instructors to select qualified TAs for their courses, and allowing instructors to delegate and oversee online grading duties to TAs, and lastly a TA Handbook documenting TA onboarding and training information, TA roles and their duties and expectations, and suggested TA-student ratio and professor advising and communication.

The goals of this system are to benefit faculty by allocating workload to TAs and limiting effort to manage them, benefit TAs by clearly defining responsibilities and enabling ease of handline them, and to benefit the department by improving student outcomes with more oversight and maintaining long-term course records.

The educational issues addressed are not specific to VCU Computer Science, so this system may be easily expanded to manage TAs and course information in other fields and at other universities. The main goal of this course management system is to ensure the best utilization of undergraduate TAs as a resource, but it will also address other needs such as storing course information in a centralized, long-term, digital format to be accessed for internal reports and external accreditation. The system will also counteract the shortage of CS-educated professionals in industry by improving the scalability and quality of CS education.

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