

THE NBME CUSTOMIZED ASSESSMENT SYSTEM

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Summary:

In this Electronic Demonstration, the authors will exhibit the web-based Customized Assessment Services (CAS) of the National Board of Medical Examiners (NBME). After two years of field testing at medical schools, the NBME plans to introduce CAS for basic science examinations in academic year 2007-08. This system will enable medical schools to construct and administer basic science exams tailored to course content using items from NBME subject test pools.

Abstract:

To use CAS, authorized faculty members logs in over the web to the secure NBME Medical School Resource Site for their institution. They then create a “test blueprint” that specifies the disciplines and organ systems to be covered, along with desired item counts in individual topic areas reflecting content coverage in course(s) for which the test is targeted; “starter” blueprints are provided in a blueprint library to aid in this process. The user may also specify the desired number and types of images (eg, path specimens, CTs, X-rays, patient photos, graphs) to be included on the exam.

The test blueprint is then sent over the web to automated test assembly software, which uses mixed integer programming software to build a draft exam to user specifications; the software also selects “substitute” items for faculty members to use as replacements for unsatisfactory items in the draft exam. Authorized users then review the draft exam over the web, replacing items as necessary to improve the fit to curriculum content. Users also define the scores to be calculated and reported to students by selecting among predefined subscore categories or by defining custom categories.

Subsequently, the test is published to a central server and then computer administered at the school under proctored conditions using a secure web browser. Students’ responses to items are scored at the NBME, and score rosters and graphical score reports for individual students are produced and posted electronically to the Medical School Resource Site. Subsequently, course faculty can review item-by- item summaries of their students’ performance over the web, along with comparative information from USMLE Step 1 or NBME basic science subject test administrations.

At the electronic demonstration, interested participants will be able to build and refine a draft exam over the web and review sample exams and score reports from schools participating in CAS pilots.

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