NBME® CUSTOMIZED ASSESSMENT SERVICES

Create Examinations
Tailored to Your Curriculum

NBME®

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OVERVIEW

NBME offers the Customized Assessment Services (CAS) program to enable medical school faculty to build high-quality examinations tailored to local curricula using NBME test questions. CAS Proctored exams offer pre-clerkship and clerkship content to support integrated curricula at medical schools and are taken by examinees under proctored supervision. CAS Practice exams offer pre-clerkship content and are taken by examinees without proctoring.

CAS helps support local organ-system, discipline-based, problem-based or other curricular approaches. To do so, NBME has assembled a large pool of test items covering the topics commonly taught and tested in coursework. These test items have been permanently transferred from the United States Medical Licensing Examination® (USMLE®) or NBME® Subject Examination pool, and therefore have undergone the same rigorous quality assurance protocols as all USMLE test items.

Policies for Use of Customized Assessment Services

Participating schools must agree to use Customized Assessment Services in compliance with NBME policies and procedures. Moreover, participating institutions must understand that NBME customized assessments are intended to complement other sources of information about the educational progress of students. The assessment results should be interpreted in light of other available information. Likewise, curriculum evaluation cannot be based on assessment results alone. The quality of teaching can and should be evaluated by frequent peer observation and student feedback, not inferred solely from the level of assessment results.

The success of this program depends on vigorous adherence to NBME policies and protocols, including the implementation of the strictest security measures.

Of equal importance, NBME is committed to protecting the high-quality reliability, validity, and confidentiality of the examinations it creates and manages. We work with our partners, customers, and examinees to continuously identify the right solutions to improve exam security. We have a customized security approach for each of our assessments. NBME collaborates with partners, clients, and test administrators to meet agreed upon security standards.

Access

CAS is available through the MyNBME® Services Portal, the primary source for authorized medical school representatives to obtain information about their students. Access enables a variety of activities related to USMLE, NBME Subject Examinations, and other services.

An annual subscription fee for CAS includes:

▶ program setup

▶ support for test construction and test administration activities

▶ construction of all CAS examinations for students

▶ score reports, individual student performance profiles, and

▶ item analyses for each CAS examination

Key Medical School Staff Roles

Listed below are the key players that support the construction and administration of the Customized Assessment Services program.

Executive Chief Proctor

The Executive Chief Proctor (ECP), nominated by the dean, has access to the MyNBME Services Portal and has overall responsibility for ordering services online, coordinating test administration activities, and assuring that the security of the test items reviewed by faculty and seen by examinees is maintained. Specific ECP responsibilities are outlined below.

The ECP plays a key role in all local aspects of the CAS program.

Order a Subscription

The first step is for the ECP to order a subscription to the service and identify the estimated month and year that test construction activities will begin. NBME must receive payment for the subscription fee before the subscription period starts unless it is paid by check. The subscription becomes active on the first day of the month entered as the starting point for test construction activities.

Go online to the Customized Assessment Services Fees page to view current fees for the service.

Logging into CAS

To access the CAS system, faculty will follow NBME's security process. This validation of identity currently requires an initial configuration of a cell phone, landline, or tablet. Two-factor authentication is also used to access the Item Analysis app, which is available for review when the score reports are posted to the MyNBME Services Portal.

Test Administration

CAS Proctored exams must be proctored and are administered locally at your institution. CAS Practice exams do not require proctoring and can be taken at any convenient location. CAS tests are not available for delivery at Prometric test centers. For more details about Test Administration, please go to the NBME Examinations Rules and Conduct page on the NBME website.

Faculty Participants

Any faculty member may participate in the test construction process; however, those who will review NBME test items must agree to the terms and conditions when first accessing the Customized Assessment Services system. Faculty members should review the terms and conditions carefully prior to deciding whether to agree and comply or not. Individuals who do not agree to the terms and conditions will not be able to access the Customized Assessment Services system.
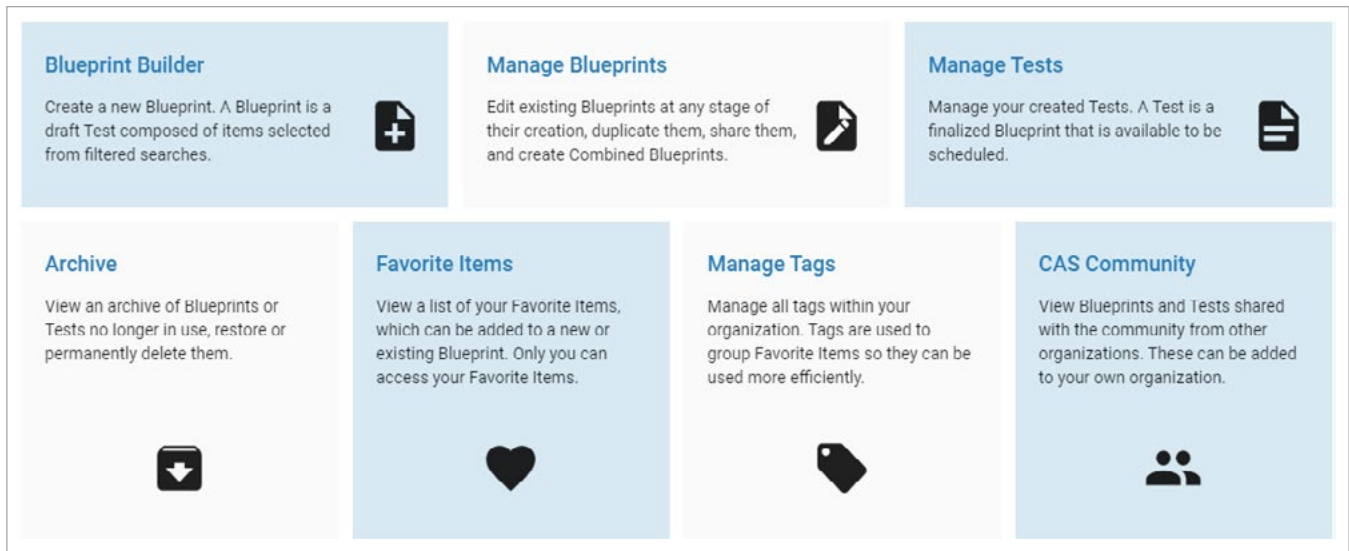
User Account Administrator (UAA)

The UAA creates and manages accounts in the MyNBME Services Portal for eligible and qualifying staff who need to access the test construction system, score reports, or item analysis data.

OTHER RESOURCES: For more information about all NBME examinations, please visit the Assess & Learn page on the NBME website.
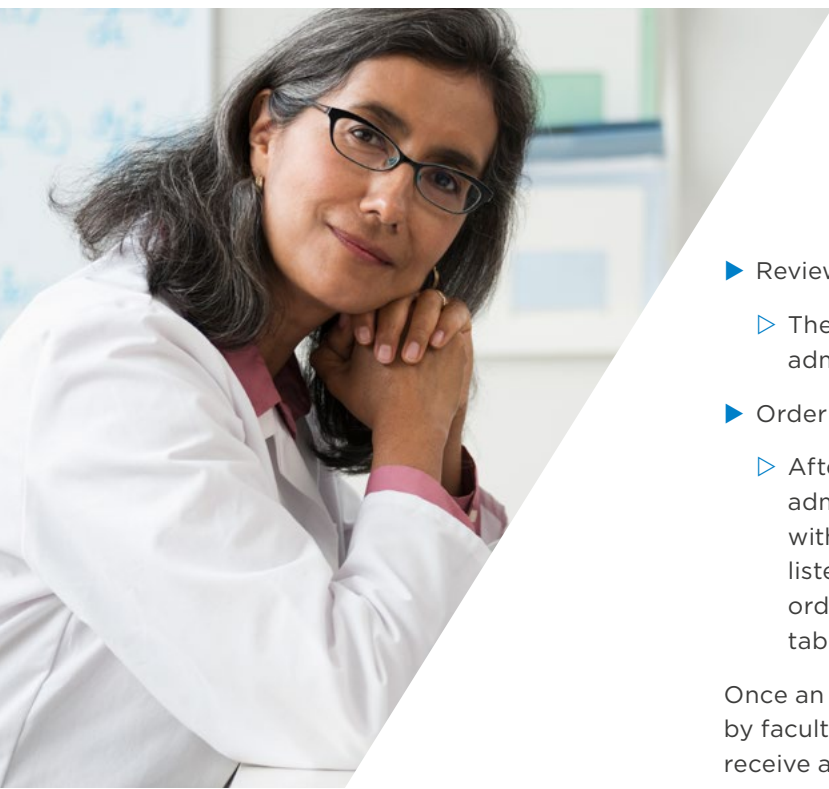
TEST CONSTRUCTION ACTIVITIES

The main menu of the customized assessment test construction system is displayed below.

The components of the test construction process include:

▶ Build Your Blueprint

▷ Create a selection of test items using a variety of filters (such as organ system, discipline, vignette type, and medication)

and/or

▷ Search by keyword for specific concepts and add additional filters to refine your search

▷ Assign a target number of test items for each selection

▶ Item Preview and Selection

Continue to the Item Preview and Selection stage to review and select your test items

▷ Review your item content.

▶ A variety of attributes (such as item difficulty and associated source exam, default score categories, and content outline categorization) are provided.

▶ You may also filter and sort test items in various ways.

▷ Drop and replace unwanted test items using the Refresh button, as necessary

▷ Create and assign any custom score categories, if desired

▷ Finalize your test

▶ Review the Test

▷ The test should be reviewed in advance of the test administration as a final content check.

▶ Order the Test

▷ After the test has been finalized, it can be ordered for administration by the ECP or other medical school faculty with the Ordering Services permission. Your exam will be listed under Customized Assessment Services in the ordering system, which is accessed via the Purchasing tab in the MyNBME Services Portal.

Once an examination has been constructed and finalized by faculty, the faculty member who finalized the exam will receive an e-mail notification that it can be requested for test administration through the online ordering system.

Additional Features

Combine Your Blueprints/Tests This feature includes the capability to combine blueprints or tests into one exam form. For example, if you are building a test that covers content across different courses, separate exams can be generated from different blueprints and then merged into one to create a new test.

Custom Score Categories Create custom score categories by individually tagging test items or merging default score categories to receive extra feedback on your score reports. Score categories must contain a minimum of 20 test items to generate a numeric subscore to appear on the Percent Correct and Scaled Score Reports, and a minimum of 10 test items to generate a profile band to appear on the Individual Examinee Performance Profiles.

Item Usage Easily see when a test item is on other blueprints and tests at your school.

Favorites Add items to your Favorites as you view them to create a personal repository of your Favorite Items. Use the tagging feature to Tag your Favorite items to a course, curriculum, or learning objective. Tags can also be used to blueprint and create custom score categories.

CAS Community The CAS Community allows you to share your blueprints and tests with all medical school faculty that use CAS. You can also view blueprints and tests posted by faculty at other schools. Blueprints and Tests posted to the CAS Community can be downloaded to use within your school, and can be edited to better fit your course or curriculum.

SCORE REPORTING

NBME customized assessments provide institutions with a tool for measuring examinees' understanding of a series of content areas as defined by the institution. Because course objectives vary, customized assessments allow faculty to build assessments that target the specifics of a given curriculum.

NBME neither sets nor recommends a "passing" score. We encourage customized assessments be used in conjunction with other indicators of student performance to determine grades.

Percent correct scores are computed and provided for the total test and the content areas defined during the test construction process. Scaled scores are also reported for the total test and content areas when a scaling group is defined*. Scaled scores are computed to have a mean of 70 and a standard deviation of 8 for the your defined scaling group. The scale provides a useful tool for comparing the scores of students to one another as well as identifying the relative strengths and weaknesses within the content areas defined for the exam.

Feedback is based only on the performance of students from your school who took the customized assessment. (Norm data based on a large, representative group of examinees is not available for customized assessments, since the exams are targeted specifically to an individual curriculum.) Results should not be generalized to other cohorts, either within the institution or across other institutions.

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* A scaling group is automatically created if there are at least 25 examinees. Scaling groups can also be defined through the Scaling Group Application. A scaling group excludes examinees who did not take the exam under standard pacing conditions, scored greater than 3 standard deviations below the mean, or omitted more than 10% of the items. Additionally, any examinee that is removed from the examinee group by the Chief Proctor will be removed from the scaling group.

There are two stages of score reporting:

1. Immediately After the Test Session Closes – Total Test Percent Correct Scores

CAS Proctored exams: After the test session is ended by the proctor through the proctoring system, a roster confirmation will appear listing the examinees along with their total test percent correct scores. The percent correct mean, standard deviation, and minimum/maximum scores are also shown. The proctor may exclude any records that are invalid (e.g., if an examinee left due to illness) and then confirm the group to be submitted for final scoring.

The individual total test percent correct scores and summary statistics may be printed, downloaded to Excel, or saved as an Adobe® Reader (PDF) file.

CAS Practice exams: Upon completion of their exam, examinees will receive their percent correct score and have the ability to review questions answered incorrectly.

2. Within 2-3 Business Days of the Test Administration Date – Full Score Reports

NBME will send an e-mail notification to the ECP when the score report is posted to the MyNBME Services Portal.

The various score reports included with CAS are described on the following page.

The final score report contains the following components:

▶ Score Report – For both the percent correct and scaled score (if applicable) reports, three types of feedback are provided in a single PDF file:

    1. Total Test and Content Area Score Descriptive Statistics

    2. Total Test Score Frequency Distribution

    3. A Roster Containing Total Test and Content Area Scores for each Student

▶ Score Interpretation Guide

▶ Downloadable Excel Files of All Reported Scores

▶ Individual Performance Profiles (with a minimum of 25 examinees)

▶ Item Analysis in Two Formats:

    1. Web-based: provides the capability to review full test item text with related item statistics online

    2. Downloadable report (PDF and CSV files): includes a short keyword description of the test item and individual item statistics.

Components of the score report and information about the performance profiles and test item analysis are described in the table on page 10.

SCALING GROUP APPLICATION

Because scores for customized assessments are locally scaled for each test administration, examinee scores cannot be directly compared across multiple administrations of the same examination. A Scaling Group Application (SGA) is available to link these administrations for comparison purposes. The SGA, accessed through the MyNBME Services Portal, is available to institutions with active subscriptions to CAS.

SAMPLE SCORE REPORT COMPONENTS

CAS Proctored exams: Total Test Percent Correct Scores and Summary Statistics Generated at the Close of a Testing Session

NBME®
National Board of Medical Examiners

Disease and Diagnosis
School ID and Name

Test Window: XX/XX/XXXX to XX/XX/XXXX

Examinees Tested: 143   Examinees Not Tested: 0   Examinees Scored: 143

Preliminary % Correct Mean: 69% Std Deviation: 8 Min: 47% Max: 87%

Note: The summary statistics and percent correct scores shown are preliminary and may be subject to change on the final score report as a result of quality control analysis.

Examinee Name	Examinee ID	# of Items Completed	Preliminary % Correct
Test, One	3043	144 out of 144	70%
Test, Two	3009	144 out of 144	74%
Test, Three	3022	144 out of 144	76%
Test, Four	3006	144 out of 144	62%
Test, Five	3053	144 out of 144	76%
Test, Six	3030	144 out of 144	69%
Test, Seven	3061	144 out of 144	50%

Final Score Components

Component	Description	Minimum # Examinees Required to Receive
Percent Correct Score Report PDF format Excel format (score roster only)	For the total test and content areas with a minimum of 20 items: ▶ Score Interpretation Guide ▶ Roster of percent correct scores ▶ Descriptive statistics: number of items, mean, standard deviation (SD), lowest score, highest score ▶ Standard error of measurement (SEM) and reliability with a minimum of 10 examinees ▶ Frequency distribution of total test percent correct scores NOTE: Descriptive statistics are reported for the total group. If a scaling group was defined for the test administration, then reliability and SEMs are reported based on the scaling group.	**1** (based on the total group, which includes all examinees)
Scaled Score Report PDF format Excel format (score roster only)	For the total test and content areas with at least 20 items: ▶ Score Interpretation Guide ▶ Roster of scaled scores (mean 70, SD 8) ▶ Descriptive statistics: mean, SD, low score, high score ▶ Frequency distribution of total test percent correct scores NOTE: Descriptive statistics are reported for the total and scaling groups. Reliability and SEMs are based on the scaling group defined for the test administration.	**25** (based on the scaling group: students taking the exam on the same date and/or an earlier date [†]) [†] A scaling group excludes examinees who did not take the exam under standard pacing conditions, scored >3 SDs below the mean, or omitted more than 10% of the items. Additionally, any examinee that is removed from the examinee group by the Chief Proctor will be removed from the scaling group.

Final Score Components (continued)

Component	Description	Minimum # Examinees Required to Receive
Item Analysis (IA) PDF format Excel format	Summary results: number of items, mean item difficulty, and mean item discrimination by content area Item-by-item results: source exam, content area classification, keyword description, level of difficulty (p-value) for your examinees, level of difficulty for the source exam, difference between the difficulties, and discrimination index NOTE: If a scaling group is defined for a test administration, then the IA statistics are based on the scaling group. If a scaling group is not defined, then the IA is based on the total group.	**10** for item difficulty **40** for item discrimination* *Standard exemptions for scaling groups will apply.
Item Analysis app For CAS Proctored exams, only available for faculty and cannot be shared with examinees. For CAS Practice exams, accessible only by faculty and can be reviewed with individual or groups of examinees for post-administration exam reviews.	Item-by-item results: ▶ complete item text ▶ % of examinees answering each option ▶ difficulty (p-value) ▶ discrimination index ▶ national p-value based on previous use of the item in USMLE and/or subject exam	**10** for item difficulty **40** for item discrimination* *Standard exemptions for scaling groups will apply.
Individual Examinee Performance Profiles PDF format bundled in WinZip file	Graphical profile for each examinee that shows: ▶ total test scaled and percent correct scores ▶ horizontal bands displaying areas where performance was lower, average, or higher in relation to the scaling group to help identify areas of strength and weakness	**25** (based on the scaling group)
Examinee Question Level Feedback Excel Format	▶ Provides information on the performance of each examinee on each item, including item-level content keywords and difficulty statistics from the source exam.	**1**

CONTACT US

Please feel free to contact us at support@nbme.org if you have any questions. NBME staff can provide the information you need or help solve a problem.