



NBME[®]
INTERNATIONAL
FOUNDATIONS OF MEDICINE[®]

PROGRAM GUIDE FOR INSTITUTIONS

Measure Student Knowledge and
Compare to an International Standard



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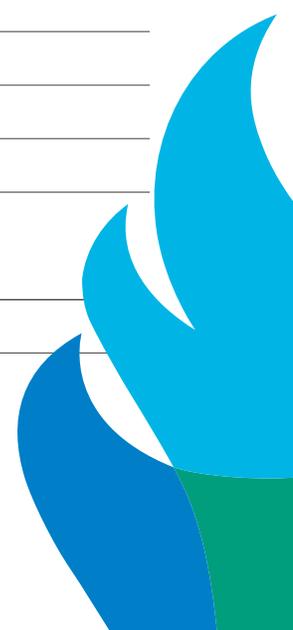
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OVERVIEW AND POLICIES FOR USE OF INTERNATIONAL FOUNDATIONS OF MEDICINE EXAMINATIONS

This guide provides general information about the International Foundations of Medicine (IFOM®) program offered by NBME.

Mission of the Program

The primary mission of the NBME International Foundations of Medicine program is to serve global medical education by providing high-quality assessment tools suitable for use potentially anywhere in the world and for a variety of purposes.

Background

NBME offers a portfolio of standardized, discipline-based exams for use in assessment throughout the medical school curriculum. These exams provide institutions with effective evaluation tools and useful examinee performance data that can be compared with a large representative group of examinees at the same stage of training. IFOM exams are available globally in English, Spanish and Portuguese and provide faculty with valuable feedback on the performance of their examinees.

The IFOM exams are developed and reviewed by committees and task forces comprising faculty from around the world. These committees follow the same rigorous protocol used to build Step 1 and Step 2 Clinical Knowledge (CK) of the United States Medical Licensing Examination® (USMLE®). The IFOM exams offer many benefits in the assessment of student achievement:

- ▶ Performance feedback provides comparisons of individual examinee and cohort performance against the IFOM International Comparison Group, which includes examinees from the Americas, Asia, the Middle East, Africa, Europe, and Oceania.

- ▶ Items are included on exams only after extensive review and pretesting.
- ▶ Item formats are similar to those used in Step 1 and Step 2 CK.
- ▶ The exams concentrate heavily on application and integration of knowledge rather than on recall of isolated facts. Many items are framed in the context of clinical vignettes.
- ▶ Multiple forms of each exam are available.

IFOM exams are intended to complement other sources of information to evaluate the educational progress of medical students and others who take these exams and should be interpreted in addition to other available information. The quality of teaching can and should be evaluated by frequent peer observation and personal feedback, not inferred solely from test scores.

IFOM Program Goals

Our multifaceted program goals are to provide:

- ▶ high-quality assessments that are efficient and cost-effective
- ▶ opportunities to conduct and disseminate research that informs faculty and policy makers and promotes their understanding of assessment
- ▶ information on student educational accomplishments to help advance educational improvement and equity
- ▶ support services for a range of assessment and educational programs

Policy on Use of IFOM Examinations

NBME provides IFOM exams in the basic and clinical sciences for the purpose of assessing the educational achievement of individuals in specific content areas. These exams may be provided to medical schools and other institutions with a legitimate interest in the education of physicians or other health professionals.

All institutions using these exams must comply with test administration standards, including security protocols.

IFOM exams are designed primarily for use as summative exams after courses, clerkships, or other units of instruction. They may also be used formatively but **should not be used as practice exams**. IFOM scores do not satisfy medical licensure requirements in the USA.

Legal Compliance

Any institution using these exams must comply in all respects with all applicable laws, regulations, and orders to which it may be subject. Institutions using these exams must not be (a) located in a country that is subject to comprehensive sanctions by the United States; or (b) listed on, or owned or controlled by a person listed on, or acting on behalf of a person listed on, any of the U.S. government denied parties lists, including without limitation, the BIS Denied Persons, Entity or Unverified Lists; the OFAC Specially Designated National and Blocked Person List; or the U.S. State Department Directorate of Defense Trade Controls (“DDTC”) Debarred Parties List (collectively the “Denied Party Lists”).

Institutions shall not, without first obtaining prior express written approval of NBME and any necessary export or re-export licenses, sell, export, re-export, transfer or otherwise transmit the NBME exam materials or related services directly or indirectly: (i) for any prohibited end uses; (ii) to any prohibited

destinations, including countries subject to United States comprehensive sanctions (e.g., Iran, Syria, the Crimea Region of Ukraine/Russia, Cuba or North Korea); (iii) to any individuals or entities that are presently themselves on, or owned or controlled by an entity that is on any Denied Party Lists; or (iv) that would, if exported or re-exported by NBME, violate U.S. export control or economic sanctions laws or require the issuance of a U.S. export license by one or more U.S. government agencies.

Institutions using these exams must not engage, use or otherwise involve any individuals or entities that are presently themselves on, or owned or controlled by an entity that is on any Denied Party Lists, in paying any monies or fees to NBME.

Research/Publications

NBME analyzes IFOM exam-related data to ensure the integrity, security, fairness, and effectiveness of the assessment. NBME may also use examination data for research and other purposes consistent with NBME’s [Privacy Notice](#). Institutions that administer the IFOM examinations, as well as NBME itself, may also use exam-related data to conduct and publish research as long as neither individual performance results nor individual examinees are identified. Both NBME and user institutions have the right to review publications, press releases, public postings, and presentations about IFOM examination data and to comment on them prior to release.

Examinees may opt out from their IFOM examination data being used by NBME for research intended for publication by indicating their preference in their account at MyNBME.org or by emailing at subjectexams@nbme.org.

Learn more about NBME’s privacy practices by reviewing our Privacy Notice, available at: <https://www.nbme.org/privacy>.

The Executive Chief Proctor (ECP)

NBME requires that a single individual be designated to oversee all NBME examination services used by an institution.

At medical schools, the ECP is nominated by the dean and approved by NBME. The ECP role is usually filled by someone in the dean's office (e.g., an associate dean) who has a commensurate level of authority. At residency programs or other organizations, these responsibilities may be carried out by a designated individual approved by NBME.

Primary Responsibilities of the ECP

The following list outlines the primary duties of the ECP position:

- ▶ Become thoroughly familiar with the content in the IFOM ECP Procedures Manual.
 - ▶ Ensure that the security of all examination content is maintained at all times.
 - ▶ Oversee administrative tasks for the local provision of services, particularly online ordering of web-based exams.
 - ▶ Nominate an Associate Executive Chief Proctor (AECPP) for any campus other than the main institution where NBME exams are also administered.
 - ▶ Ensure that all staff responsible for administering examinations (i.e., Chief Proctors or AECPPs) prepare for and conduct the test sessions in strict compliance with the procedures and regulations outlined in the Web-Based Examinations Chief Proctor's Manual or the Test Administration Manual (for paper exams).
 - ▶ Ensure that all NBME examinations are administered in a secure, proctored setting.
 - ▶ Ensure that examinees follow [test day rules and procedures](#).
 - ▶ Report any suspicious activities observed during an administration to NBME immediately.
 - ▶ Conduct investigations regarding irregular behavior, if necessary, and promptly provide NBME with the outcome of any such investigation.
- ▶ Cooperate with NBME in any investigation of a possible security breach.
 - ▶ Collaborate with AECPPs from schools where your student(s) are doing rotations to make arrangements for your students to test, if necessary.
 - ▶ Establish and monitor local financial accounts for services.

Security of Examinations

To ensure the integrity of the NBME exams and the validity of the scores reported, it is essential to maintain the security and confidentiality of test materials at all times. All items used in IFOM exams are owned and copyrighted by NBME and/or its licensors. In addition, any unauthorized reproduction or dissemination of test materials or any part of them through any means, including but not limited to copying, printing, photographing or downloading of electronic files, or reconstruction through memorization and/or dictation, is strictly prohibited.

Institutions must notify NBME immediately upon discovery or reasonable suspicion of a security breach. The Institution must cooperate with any NBME investigation of any actual or suspected security breach, and/or will conduct its own investigation at NBME's request, including but not limited to interviewing examinees and proctors, and will promptly provide the NBME with the outcome of its own investigation, if any.

NBME reserves the right to pursue its rights and remedies to the fullest extent permitted by law without further notice, including taking legal action. NBME also reserves the right to discontinue examination services in the event of a breach or suspected breach in the security of test materials.

NOTE: If your institution would like to administer NBME exams at other campuses, the ECP must designate an AECPP to oversee the administration at the new campus location. AECPPs must follow the same procedures as ECPs to maintain the security of test materials.

Test Delivery Options

Web-Based Examinations at Your Institution

Web-based exams must be administered in a secure, proctored setting. The Chief Proctor (CP) will have access to a centralized Chief Proctor Resource Site, which houses all the system applications in support of test administration. The CP must conduct the exam in strict compliance with the procedures outlined in the Chief Proctor's Manual.

NBME provides a web-based utility that checks both hardware and software configurations and downloads a plug-in that secures the browser. The computer is locked down, preventing the examinee from accessing applications such as e-mail or Notepad.

It also includes a function designed to detect any recording applications and programs that may be running on workstations or examinees' personal laptops prior to the start of the exam.

Web-Based Examinations at Prometric Test Centers

IFOM exams are available for administration at Prometric's worldwide network of secure test centers.

Prometric testing may be preferred for students serving on clinical rotations in a distributed hospital

network or for those located at a site without web-based test delivery capability. It may also be useful for makeup tests.

This option requires advance planning to allow students sufficient time to schedule testing appointments. See page 11 for detailed information about this process.

Note as well that medical students and graduates may register to take IFOM exams at Prometric centers, independently of their medical schools or training programs.

Paper Examinations at Your Institution

As with our web-based tests, IFOM paper exams must be administered in strict compliance with the IFOM Test Administration Manual. For paper exams, orders must be placed and student rosters submitted at least 30 days in advance of the test date.

Language Options

The IFOM Clinical Science Examination is available in English, Spanish, and Portuguese. The IFOM Basic Science Examination is available in English and Spanish. IFOM examinations at Prometric Test Centers are only available in English.



IFOM CONTENT

The IFOM program consists of two comprehensive exams, the IFOM Basic Science Examination and the IFOM Clinical Science Examination.

These are achievement tests covering material typically learned during basic science education and core clinical clerkships. They reflect content similar to that of the USMLE Step 1 and Step 2 CK exams and are typically used to identify areas of strength and weakness at key points during medical training.

NBME also offers an IFOM Clinical Science Self-Assessment for examinees preparing to take the IFOM Clinical Science Examination.

Content Outlines and Sample Items

IFOM content outlines developed by NBME committees of content experts are used to construct each test. Items are selected based on content and performance statistics. The final form of each exam is reviewed and approved by the appropriate committee prior to release. Multiple forms of each exam are typically available at any time so that alternate forms may be used for successive courses and clerkships or for makeup exams. Content outlines and sample items for the IFOM exams are available on the [IFOM webpage](#), on the Exam Content and Resources tabs.



IFOM content outlines are developed by committees of content experts; the items are selected based on content and performance statistics.

ORDERING AND TEST ADMINISTRATION

MyNBMESM Services Portal

When a school or other organization is authorized to use the NBME exams, an account is created for the school on the MyNBME Services Portal, a secure website and the primary source for authorized users to access NBME products and obtain information about their students for a variety of activities related to IFOM, NBME's other medical school exams, USMLE, and other services. The Portal provides access to the NBME Ordering Systems, Customized Assessment Services, roster management for web-based exams, and scores and year-end reports.

A major feature of the portal is the capability for an institution to create and manage its own users and to assign privileges to users to access specific areas of the portal.

Each institution has at least one User Account Administrator who assigns users the privileges they need to access areas of the portal appropriate for their responsibilities.

Online Ordering Systems

IFOM web-based exams are ordered through the NBME Ordering System; paper exams are ordered through the NBME Store. Both are accessible through the MyNBME Services Portal.

Detailed information, test-location options, and instructions for ordering web-based and paper exams are available in the ordering systems. All exams must be ordered in a time frame that is sufficient to allow for processing and scheduling administrative or technical support:

Web-Based Administrations Through Your Institution	<ul style="list-style-type: none">▶ Orders may be placed up to and including the 2nd calendar day prior to the test date.▶ Orders lock* 2 calendar days before the test date.
Web-Based Prometric Administrations	<ul style="list-style-type: none">▶ A testing window of 7-14 calendar days is required.▶ Orders must be placed no later than 28 days prior to the start of the testing window.▶ Orders lock* 21 calendar days prior to the start of the testing window.
Paper Examinations	<ul style="list-style-type: none">▶ Orders must be placed and complete and accurate student rosters must be received no less than 30 days prior to the test date. Any delays in receipt of a final student roster may require a delay in the test date.

*** All web-based exam orders can be revised or cancelled any time prior to the lock date. After the lock date, NBME must be contacted to make order changes.**

IFOM Exam Form Assignment

Consistent with best practices and global standards for high-quality testing programs, NBME routinely employs multiple IFOM forms for test administrations throughout the year. The number of forms available for each exam may vary; schools that intend to administer an exam multiple times to the same cohort should contact subjectexams@nbme.org to ensure your cohort will not see the same form multiple times.

The scores on each examination form have been equated across forms and administrations so that your examinees' performance is directly comparable, regardless of which form has been administered. Equating is a process that statistically adjusts for variations in test form difficulty so that scores on forms of different difficulty can be used interchangeably. Equated scores can then be used to compare and track school and examinee performance over time.

When you order an IFOM exam, a form is assigned at the order level if the exam will be delivered locally, or at the examinee level if the exam will be administered at a Prometric test center. Form assignments enhance security. While examinees may see different forms, all scores are comparable regardless of the form administered.



Scheduling Web-based Exams at Prometric Test Centers

After the test administration roster has been created for a web-based exam at a Prometric test center, NBME generates a scheduling permit for each examinee in approximately 2-3 business days. There are exceptions if the examinee requires test accommodations (see page 13). Each examinee will receive an e-mail from NBME with a URL to access and print or download their scheduling permit. Information printed on the scheduling permit is required to schedule a testing appointment through Prometric’s website. The permit also has information about admission to the test center, cancelling/ rescheduling appointments, and other policies and procedures.

Payment Policies and Procedures

Exam Fees

Current IFOM exam fees are listed on the [Fees](#) tab of the [IFOM webpage](#).

Billing Accounts

NBME requires that accounts be set up for the purpose of applying fees received and for computing any credit or payment due after scores have been reported.

There are two types of accounts: an institutional or ECP Account, which is required, and department accounts, which are optional. Typically, these accounts reflect funding sources at an institution. Accounts may receive credits when necessary; refunds are not provided.

MyNBME Services Portal features a “My Billing Accounts” portlet through which those who order

or arrange for payment of exam services can view up-to-date information about the status of invoices, access monthly summaries, and pay for services directly.

Payment Options

Payment for exam services may be made by:

- ▶ Credit card (Visa, MasterCard or American Express)
- ▶ Check or money order
- ▶ Wire transfer
- ▶ Institution account with a credit balance

Payment Terms

NBME policies for payment are as follows:

- ▶ Payment of invoices generated for NBME exam services must be received by NBME prior to the scheduled test date.
- ▶ Payment must be in US currency only and in the payment forms specified in the Payment Options section above.
- ▶ Payments, regardless of form, from examinees are not accepted.
- ▶ No refunds are provided, but credits that can be used for future orders may be applied in certain cases.
- ▶ Score reports may be withheld by NBME unless payment for an order has been received.

If an account accrues more than \$1,000 in invoices that remain unpaid for more than 90 days following the test date, all score reports associated with that account may be held by NBME until the account is brought current. This applies even if other orders for that account were prepaid.

Administering IFOM Examinations

The ECP has overall responsibility for management and planning of test administration events. The ECP is also required to recruit chief proctors and other support staff, as needed, to perform the tasks necessary to ensure a successful and secure test administration.

NBME expects all proctors to be prepared to administer NBME exams according to our policies and procedures.

Detailed instructions for ECPs, chief proctors, and proctors are available in the ECP Manual, the Chief Proctor Manual (for web-based tests) and the Test Administration Manual (for paper tests). These manuals and other technical instructions for administering NBME exams are available on the MyNBME Services Portal.

Test Administration Support

Web and Paper Examinations at Your Institution

NBME staff will be available for test administration support on your test date to respond to technical or procedural issues that may arise.

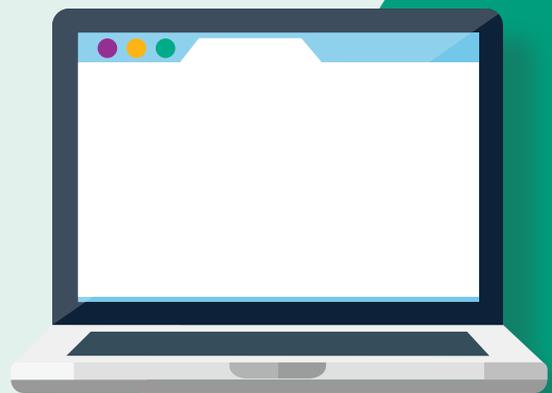
NBME staff are available 24 hours a day, 7 days a week by calling 215-590-9298 (exclusive of NBME holidays).

Web Administrations at Prometric Test Centers

Prometric test center staff will administer NBME examinations in a secure setting and respond to any technical or procedural issues. Information about Prometric test centers is available at www.Prometric.com.

Policy for Web-Based Testing Outages

NBME is committed to providing excellent customer service. However, technical problems may occur prior to or during an examination which may prevent examinees testing at institutions (e.g., medical schools) or Prometric test centers, from accessing or completing examinations. While we are working to lessen the frequency of such situations, it is impossible to eliminate their occurrence altogether. Detailed instructions regarding your options in the event of a web-based testing outage are published in the Chief Proctor's Manual.



TEST ACCOMMODATIONS

Examinees with Disabilities

Individuals with disabilities may be entitled to accommodations under applicable law in your location. The school or other ordering organization will determine whether any accommodations are warranted, decide what specific accommodations may be reasonable for a particular examinee, and bear all costs associated with any such accommodation. NBME will make a good faith effort to provide such reasonable test accommodations that the school determines are warranted for the examinee.

You must notify NBME of any examinees who have been approved for accommodations at the time the order is placed. For additional information, contact us at SubjectExams@nbme.org or (215) 590-9258.

Extra Testing Time and Text Enlargement for Local Administration of Web Examinations

NBME has several pacing options (1.25x, 1.5x or 2x) for examinees needing extra testing time. The pacing is set in the examinee's record on the test administration roster, which alerts the system to create an extra-time form. Examinees with visual impairments may use their own screen magnification software or use the browser's text size feature to enlarge the font.

Accommodations at Prometric Test Centers

It is possible to arrange for examinees to take an examination with test accommodations (e.g., extra testing time) at a Prometric test center.

Orders should be placed as far in advance as possible because generating these scheduling permits could take up to two weeks.

SCORING FEEDBACK

Score and Analytical Reports

NBME provides a variety of performance feedback. Sample score reports for the IFOM exams can be found on the [Scoring](#) tab of the IFOM webpage.

Scoring, Scaling, and Equating of IFOM Examinations

Detailed information about scoring, scaling, equating, and the make-up of comparison groups for the IFOM exams is available, along with sample score reports, on the [Scoring](#) tab of the IFOM webpage.

Standard score reports for web-based IFOM exams are normally delivered within a week of the test date; standard score reports for paper exams are normally delivered within 2 weeks of receipt of answer sheets.

NBME reserves the right to change its score scales, score reports, and other aspects of its score reporting for IFOM at any time, but we will always provide as

much notice as possible to help ensure organizations and examinees are prepared for the changes.

New Exam Forms

When NBME introduces new exams, equated score reporting may be delayed until sufficient data have been collected to enable score reporting. Any organization whose test administration could experience delayed score reporting will be notified and will normally have the option to reschedule the exam or request that a different form of the same exam be administered instead.



ACCESSING SCORES

Accessing Score Reports on the MyNBME Services Portal

Scores and related performance reports are available through the portal after each test administration. Access to scores and score reports can be assigned to your staff by your institution's User Account Administrator.

NBME will not otherwise transmit or report scores, including by fax, telephone, or e-mail. Score reports may be withheld for nonpayment of invoices.

Score reports for a specific academic year remain on the website for approximately four academic years for all exams. Users will be notified about a month in advance of information being removed, to allow time for final download of reports if necessary.

ADDITIONAL INFORMATION

Agreement Analysis for Irregular Testing Behavior

An agreement analysis may be requested and conducted for examinees suspected of irregular testing behavior, such as copying or collaboration. Agreement analysis is a statistical tool that can provide helpful, supportive information for the investigation of observed behaviors that may compromise the validity of examinees' scores. The agreement analysis compares the degree of agreement that is observed between the incorrect responses of two examinees (pair) with the degree of agreement that would be expected to occur between two randomly chosen examinees taking the same examination independently. Agreement analysis uses only those items that both examinees in the pair answered incorrectly.

Any actions taken by an institution on the basis of such information are completely the responsibility of the institution.

Score Recheck Service

NBME is confident that each reported score is an accurate reflection of the responses that an examinee recorded in the testing interface for web-based exams or on the paper answer sheet for paper exams. This is based on reliable scoring and reporting

techniques backed by a variety of quality control and verification procedures.

However, if a score is believed to be in error, a score recheck can be requested.

Requests for score rechecks must be initiated by the institution, either by the ECP or appropriate staff (e.g., course or clerkship director) in the department administering the test. A [Score Recheck Request form](#) is available to download from the NBME website. NBME will only accept checks or money orders from the institution. Requests will not be processed if the check or money order is provided by the examinee. Results are provided approximately two weeks after receipt of the request.

It should be noted that the sole purpose of the score recheck service is to verify that the score originally reported is correct. Score recheck requests may be made up to six months after the test date. Score recheck requests received after that time cannot be accommodated.

Additional Resources

Additional information and resources are available at www.nbme.org and on the MyNBME Services Portal (accessible only after a school or organization is authorized to use the NBME exams).

CONTACT US

Please contact us if you have any questions. NBME staff can provide the information you need or help solve a problem.

NBME Contact List

NBME Billing Accounts and Invoice Questions Only	▶ NBMEAccounts@nbme.org
Operational Support for Web-Based Subject Exams including IFOM (questions about ordering exams, faculty review, test accommodations, Prometric administrations, proctoring, exam security, scoring issues, test administration, etc.)	▶ SubjectExams@nbme.org ▶ 215-590-9258
Operational Support for Paper IFOM Exams	▶ ifom@nbme.org
All Other Inquiries	▶ support@nbme.org

