

Computerized Testing

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Computerized testing in the Computer Based Instruction Laboratory (CBIL) was initiated in the fall of 1997 due to the conversion of licensure exams for medical students in the United States (USMLE) to computer based formats by the National Board of Medicine. Medical students practiced taking computerized exams in preparation for the change from paper and pencil tests. Since then some 37 computerized exams have been conducted in 10 different M-I and M-II courses and M-III clerkships with over 3,000 student exams. Thanks to our many faculty course directors and curriculum office for working with us to develop and implement this innovation.

During the 2001–2002 school year, 19 computerized exams were administered by the Curriculum Office and by CBIL staff. M-I exams included five Histology practicals, John Bigbee, Ph.D., Course Director. M-II exams included Hematology/Oncology, Jonathan Ben-Ezra, M.D., Course Director; Endocrine, Diane Biskobing, M.D., Course Director; Respiratory, R. Paul Fairman, M.D., Course Director; Behavioral Sciences, Isaac Wood, M.D., Course Director; and two Foundations of Clinical Medicine (FCM) exams, Michelle Whitehurst-Cook, M.D., Course Director. The second FCM exam included heart and lung sounds, as well as a case based MEDLINE search question. M-III exams included eight Psychiatry Clerkship exams, Isaac Wood, M.D., Course Director.



Testing Template Developed

The computer testing template developed by Chris L. Stephens, CBIL Applications Developer, includes many features of the USMLE exam, such as the clock, the ability to clear an incorrect answer, the randomization of questions, marking questions for review, and the use of images. CBIL will continue to provide students with practice exams to familiarize them with the exam format. Student evaluations of the testing are conducted via the World Wide Web and provide many useful suggestions. Enhancements to the computer testing template included the ability to highlight or strike out text on the computer screen during the exam, and immediate generation of item analysis reports which also detail group mean scores.

For more information on computerized testing in CBIL, see the Web site at <http://www.cbil.vcu.edu/etest>. This site includes screen shots of the practice exams, instructions for use of the exam program, details of exam administration, student comments, and an outline of test capabilities.



Testing Demo Available

The program is available for use by other schools and departments at Virginia Commonwealth University. The School of Dentistry pilot tested the program in fall 2001 in the dental hygiene course.

The SOM has partnered with the NewMentor Group to make this testing program available to other medical schools. A demo of the testing program containing modules on administration, student exams and analysis is available from NewMentor Group, 360 Post Street, Suite 402, San Francisco, CA 94108. Information is also available at <http://www.newmentor.com>.

Evolution of Computerized Testing at SOM

A planning committee, including Dean Parmelee, M.D., M-II Coordinator; James Messmer, M.D., and Jennifer Deschenes, M.Ed., of the Curriculum Office; Carol Hampton, M.M.S., and Jeanne Schlesinger, M.Ed., of Faculty and Instructional Development; and Brenda Seago, M.L.S., M.A., and Chris Stephens of CBIL convened to coordinate the testing.

During the 1997–98 school year, computerized exams were administered for the M-II Endocrine course, John Nestler, M.D., Course Director, and for the Head and Neck Anatomy section of the M-I Gross and Developmental Anatomy course, James Johnson, Ph.D., Course Director; and Hugo Seibel, Ph.D., Professor of Anatomy.

The same two courses included computerized exams for the 1998-99 school year. In addition, computerized exams were given in M-II Respiratory, R. Paul Fairman, M.D., Course Director; and a second semester exam in M-II Foundations of Clinical Medicine course, Rita Willett, M.D., Course Director.

For the 1999–2000 school year, 12 computerized exams were administered. M-I exams included four Histology practicals, John Bigbee, Ph.D., Course Director; the Gross and Developmental Anatomy exam, James Johnson, Ph.D., Course Director; and a Web-based essay for the Behavioral Sciences course, Dean Parmelee, M.D., Course Director. M-II exams included Pharmacology, Earl Ellis, Ph.D., Course Director; Hematology/Oncology, Jonathan Ben-Ezra, M.D., Course Director; Endocrine, Diane Biskobing, M.D., Course Director; Neurobehavioral Sciences, Issac Wood, M.D., Course Director; and a second semester Web-based Foundations of Clinical Medicine exam, which included a case-based Medline search question, Rita Willett, M.D., Course Director.

During the 2000–2001 school year, 18 computerized exams were administered by the Curriculum Office and by CBIL staff. M-I exams included five Histology practicals, John Bigbee, Ph.D., Course Director. M-II exams included Hematology/Oncology, Jonathan Ben-Ezra, M.D., Course Director; Endocrine, Diane Biskobing, M.D., Course Director; Respiratory, R. Paul Fairman, M.D., Course Director; Behavioral Sciences, Isaac Wood, M.D., Course Director; and Foundations of Clinical Medicine (FCM), Michelle Whitehurst-Cook, M.D., Course Director. The FCM exam included heart and lung sounds, as well as a case based MEDLINE search question.

2002–2003 Computerized Testing Schedule

M-I STUDENTS	
<i>Exam</i>	<i>Date</i>
Histology Practical	1/24/03
Histology Practical	2/12/03
Histology Practical	3/1/03
Histology Practical	3/29/03
Histology Practical	4/19/03
FCM 2	5/21–5/22/03

M-II STUDENTS		
<i>Exam</i>	<i>Date</i>	<i>Self-grading Review</i>
Hemotology/Oncology	10/18/02	10/22/02
Endocrine	11/6/02	11/8/02
FCM 1	12/9–12/10/02	
Behavioral Sciences II	2/19/03	2/20/03
FCM 2	5/5–5/6/03	

M-III STUDENTS

<i>Exam</i>	<i>Date</i>
Psychiatry Clerkship	9/6/02
Psychiatry Clerkship	10/17/02
Psychiatry Clerkship	11/27/02
Psychiatry Clerkship	1/24/03
Psychiatry Clerkship	3/7/03
Psychiatry Clerkship	4/18/03
Psychiatry Clerkship	6/6/03
Psychiatry Clerkship	7/18/03

2002-2003 ACADEMIC YEAR

SCHEDULE OF SOM-BASED TESTS

<i>Exam</i>	<i>Date</i>
Psychiatry Clerkship	9/6/02
Psychiatry Clerkship	10/17/02
Hematology/Oncology	10/18/02
Endocrine	11/6/02
Psychiatry Clerkship	11/27/02
M-II FCM 1	12/9-12/10/02
Histology	1/24/03
Psychiatry Clerkship	1/24/03
Histology	2/18/03
Behavioral Sciences II	2/19/03
Histology	3/7/03
Psychiatry Clerkship	3/7/03
Histology	3/24/03
Psychiatry Clerkship	4/18/03
Histology	4/25/03
M-II FCM 2	5/5-5/6/03
M-I FCM 2	5/21-5/22/03
Psychiatry Clerkship	6/6/03
Psychiatry Clerkship	7/18/03

