

# **Handbook for Course Directors in Components I and II**

Office of Medical Education  
Creighton University School of Medicine  
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## ***Curriculum Goals and Objectives***

### **Goals**

The goal of the curriculum is to develop competent, caring physicians during graduate training and practice. Our students will acquire a strong foundation in the basic and clinical sciences. In addition, they will acquire a strong foundation in the humanities, social and behavioral sciences that are relevant to the well-being of both the physician and the patient.

### **Objectives**

To attain the Doctor of Medicine degree, the Creighton graduate must fulfill the following in the Six Competencies of Medical Education:

#### **PATIENT CARE**

- Conduct an organized medical interview and obtain a pertinent medical history.
- Identify biopsychosocial needs of the patient.
- Perform an appropriate comprehensive physical examination.
- Present information verbally in a concise, complete and organized manner.
- Record information in a concise, complete and organized manner.
- Develop a differential diagnosis for each patient seen.
- Demonstrate effective clinical reasoning and judgment to determine an accurate diagnosis.
- Develop an appropriate treatment plan for each patient seen.
- Perform health maintenance exams.

#### **MEDICAL KNOWLEDGE**

- Describe the normal structure and function of the human body at the whole body, organ, cellular, and molecular levels.
- Describe the pathophysiology, signs, symptoms, risk factors, diagnostic tests, and treatment of common illnesses.
- Describe the current evidence-based clinical practice guidelines for treatment of common illnesses.
- Describe the current evidence-based preventive health care strategies and recommendations.

#### **PRACTICE-BASED LEARNING AND IMPROVEMENT**

- Demonstrate the ability to critically assess the medical literature and the research methods used to investigate the management of health problems.

## **INTERPERSONAL AND COMMUNICATION SKILLS**

- Counsel and educate patients regarding their illness and treatment plans in an effective, concise and understandable manner.
- Communicate effectively with all members of the healthcare team.

## **PROFESSIONALISM**

- Actively participate on rounds, clinic sessions, small group sessions and labs.
- Demonstrate punctuality and availability for all duties and professional obligations.
- Demonstrate honesty and integrity with all student responsibilities.
- Demonstrate compassion and empathy in the care of patients.
- Demonstrate respect, sensitivity, and responsiveness to diversity of culture, age, gender, sexual orientation and disability.
- Identify and propose solutions to moral, ethical and legal problems in medical practice.

## **SYSTEM-BASED KNOWLEDGE**

- Use a team approach to provide comprehensive care.
- Organize patient care plans that incorporate referrals to other healthcare providers and/or community agencies and resources.
- Demonstrate an awareness of the relative cost benefit of different therapeutic options.

## **Section One: The Course Director Role**

## **Guidelines for Course Directors in Components I and II**

A Course Director in Components I and II is responsible for the planning, implementation, and continuous improvement of his/her course. A Course Director collaborates with course faculty, the relevant department chairs, and the Component Director to assure that his/her course accomplishes the tasks listed below. The Educational Policy Committee is responsible for the overall governance of the Medical Curriculum and provides direction to course directors.

The Office of Medical Education (OME) provides central support and management to assure consistency and coordination among courses. The Associate and Assistant Deans for Medical Education, the Component Director, the Curriculum Coordinator, and other OME staff work with course directors to maintain quality and consistency. The Course Director meets with the Associate Dean and the Component Director to clarify the duties of and assistance provided by the OME.

### **Course Planning**

1. Review and revise each year course goals and objectives for appropriateness and consistency with School of Medicine competencies and USMLE Step 1 content guidelines.
2. Assemble needed expertise to deliver the course curriculum.
3. Develop (and revise annually) the course teaching and learning methods.
4. Develop a student evaluation plan that
  - o Includes an appropriate combination of written, practical, and other performance measures.
  - o Uses a grading scheme that is consistent with practices in other courses.
5. Prepare a course schedule.

### **Course Implementation**

1. Monitor and ensure faculty adherence to the course schedule.
2. Coordinate small group sessions.
  - o Ensure faculty attendance.
  - o Ensure uniform coverage of curricular material among groups.
  - o Ensure that grade differences among groups and among group members are not arbitrary.
3. Attend instructional sessions as appropriate.
4. Arbitrate student concerns and complaints regarding course content and grading.
5. Examinations.
  - o Compile and review examination questions from participating faculty.
  - o Prior to an examination conduct a review of test items and other test material with course faculty to address mistakes and duplications and to ensure appropriate coverage of course objectives.
  - o After exam administration, review the examination to assure test reliability, validity, and fairness.
  - o Work with the Office of Medical Education to maintain a test item bank ensuring accuracy, fairness, adherence to course objectives, consistency with testing standards, proper degree of difficulty, and correct grammar.
6. Monitor the course grade book in BlueLine and provide timely reporting of final grades to the Office of Medical Education.

## Course Assessment

1. Use student input, personal observation, peer evaluation (where appropriate), and other sources to evaluate the course performance of individual faculty (e.g., appropriateness and organization of course content; large and small group teaching effectiveness; test material: consistent with objectives, well-constructed, and submitted by deadline; cooperation with other course faculty, course director, component director, and curriculum coordinator; relationships with students).
2. Review the strengths and weaknesses of the course annually with participating faculty.
3. Prepare an annual report addressing the status of the course. The Annual Course Report uses a prescribed form and focuses on student performance, revision of course goals and objectives, overall assessment of faculty performance, and plans for course improvement. The Annual Course Report is submitted within two months after completion of the course to the Chair of the Evaluation Committee.

## Other Administrative Duties

- For Mission Based Management reporting, ensure that accurate hours for faculty participation are kept, especially noting deviations from the published schedule.

*Approved by the Educational Policy and Curriculum Committee, July 12, 2001*

Revisions May 24, 2010/May 24, 2011

**Note:** The Annual Course Report form is found in the Appendix to this document and is available online at:

<http://medschool.creighton.edu/medicine/admin/ome/coursedirectors/index.php>

## Component I: Working with OME

The Office of Medical Education, in the persons of the Associate Dean for Medical Education [Thomas Hansen], the Component I Director [Floyd Knoop] and the Component I Coordinator [Cate Pogge], will work with you to make your course a pleasant experience for all concerned. The office works with all the first year courses, which means that preparation for one course may coincide with the end of a previous course. Therefore, to insure that the Medical Education staff can provide optimal assistance, we request that you follow the timeline below, which is designed to prevent simultaneous urgent requests for assistance.

### In the summer preceding the course

1. Contact faculty to arrange/confirm participation in the course.
2. Change from the previous year presents the greatest challenge:

Replace departing faculty. The Medical Education staff can help you identify faculty to fill vacant slots in your course. To recruit new faculty for your course, secure the agreement of the new faculty member and the appropriate division and department chairs.

(Note: before July of each year, the Department of Medicine plans its rather complex budget around the teaching commitments of each of its 11 divisions [Allergy and Immunology, Cardiology, Dermatology, Endocrinology, Gastroenterology, General Internal Medicine, Hematology/Oncology, Infectious Diseases, Nephrology, Pulmonary-Critical Care Medicine, Rheumatology]. Changes in teaching commitment after this time require shuffling the department budget.)

- a. Prepare a tentative course schedule showing the commitments of each faculty member in lecture, small group, labs, multi-disciplinary conferences, exams, etc. Cate Pogge [M1Component Coordinator] and Floyd Knoop [M1 Component Director] will provide you with a copy of last year's schedule, including prospective changes, transferred to the new academic year.
  - b. Circulate this draft schedule among your faculty and request feedback and agreement from each faculty member that will teach in your course.
  - c. Return the revised schedule to Cate Pogge by mid-late May so planning for approval by the Educational Policy Committee meeting the second week of June and requirements for room reservations for small groups, labs, etc. can be scheduled for the upcoming year. This is particularly important since room reservations are at an all-time high [and getting worse].
3. Have a course meeting if you have not had one since the end of last year's course. Cate Pogge can help arrange this with your faculty. Use the meeting to
    - get faculty suggestions for improvements
    - discuss any changes in the course
    - introduce new faculty
    - finalize the course schedule
    - review the student evaluations from the previous year
    - remind faculty to revise objectives, update lecture notes and reading assignments, and review test items.

### **Six weeks before the course (July 1 for Fall and November 1 for Spring)**



Submit final, proofread, version of updated course materials (course policies, schedule, objectives, reading assignments, lecture notes, lecture handouts) to Cate Pogge [MI Coordinator] for duplication and distribution. This will complete your course syllabus. In addition, please submit revisions of course website materials (syllabus, presentations, etc.) for web posting if applicable to your course.

### **One month before small group discussion/ multidisciplinary conference**

1. Meet with faculty to choose cases. The major disciplines (clinical medicine, pathology, pharmacology, and physiology) should be represented. Complete or assign the write-up of the student handout (case details and questions), and the facilitator script and instructions. Identify slides and other appropriate audiovisual material that illustrate the case, and prepare a slide key.
  - a. The Office of Medical Education may be able to help identify cases and supporting materials. Cases from previous years and a bank of pathology slides are available.
2. One month before the small group or conference, send us supporting material that needs to be scanned into computers or otherwise manipulated.
3. Two weeks before the small group or conference, all materials should be proofread, corrected, and the final version returned for duplication and distribution. The students need these materials well in advance to prepare the cases.
4. To distribute the student handouts with the course syllabus, final copies should be submitted with the other course materials when the syllabus is submitted.

### **Before a quiz**

1. Ten days before the quiz, be sure all quiz items, with answers, have been submitted in electronic format (i.e., word processor file or e-mail) to the Office of Medical Education for entry into the test item bank.
2. Seven days before, the quiz should be printed out for proofreading and correction.

### **Before an exam**

1. Seven days before the exam, make sure all items, with answers, have been submitted in electronic format (i.e., word processor file or e-mail) to the Office of Medical Education for entry into the test item bank.
2. *On the Tuesday or Wednesday* before the exam (assuming a Monday exam) a copy should be printed out for proofreading and correction.
3. *On the Tuesday or Wednesday* before the exam, meet with course faculty to review the test to address errors and verify the balance of exam content.
4. *On the Wednesday* before the exam, return the corrected exam copy to the Office of Medical Education so it can be reviewed, formatted into exam style, and computerized.

### **After a quiz or exam**

1. On the afternoon of the exam, the Medical Education staff will have the preliminary exam results and item analysis. Please be available to review this item analysis to pick up any problems with the answer key BEFORE the Exam Comment Session with the Unit Chairs.

2. *Within a week following a major examination* the Component I Director will schedule a meeting among the course director and student representatives (Unit Chairs) to consider student comments on the exam questions. Please plan on being available for this meeting.

### **After the end of the course**

1. Final course grades will be forwarded to students via BlueLine<sup>2</sup> within one week after the end of each course. Please be available for consultation during this time period.
2. Review the results of the course evaluation after the Office of Medical Education delivers them.
3. Within two months, prepare an annual report for the Evaluation Committee, as described in the Guidelines for Course Directors.

## **Component II: Working with OME**

The Office of Medical Education, in the persons of the Associate Dean for Medical Education [Thomas Hansen], the Component II Director [Tom Pisarri], and the Component II Curriculum Coordinator [Jackie Foster], work with you to make your course a pleasant experience for all concerned. The office works with all the second year courses, which means that preparation for one course coincides with the end of the previous course. Therefore, to ensure that the Medical Education staff can provide optimal assistance, we request that you follow the timeline below, which is designed to prevent simultaneous urgent requests for assistance. Please note that the times below are the latest feasible times for submitting material – submission of most of the material ahead of these times makes it possible to deal with the last minute material submitted at the deadline.

### **In the spring preceding the course, or immediately after your current course ends:**

1. Prepare a tentative course schedule showing the commitments of each faculty member in lecture, labs, small group, multi-disciplinary conferences, etc. Jackie Foster will provide you with a copy of last year's schedule superimposed on the new academic year.
  - o Return the revised schedule to Jackie Foster highlighting changes, requirements for room reservations for small groups, labs, etc. When you are satisfied with the schedule, ask Jackie to circulate this draft schedule among your faculty and request feedback and agreement from each faculty member.
2. Faculty changes from the previous year:
  - o Replace departing faculty. The Medical Education staff can help you identify faculty to fill vacant slots in your course. To recruit new faculty for your course, secure the agreement of the new faculty member and the appropriate division and department chairs. (Note: before July of each year, the Department of Medicine plans its rather complex budget around the teaching commitments of each of its 11 divisions [Allergy and Immunology, Cardiology, Dermatology, Endocrinology, Gastroenterology, General Internal Medicine, Hematology/Oncology, Infectious Diseases, Nephrology, Pulmonary-Critical Care Medicine, Rheumatology]. Changes in teaching commitment after this time require shuffling the department budget.)

3. Have a course meeting if you have not had one since the end of last year's course. Jackie Foster can help arrange this with your faculty. Use the meeting to
  - o introduce new faculty
  - o review the student evaluations, exam results and course grades
  - o review item statistics and correlations of test results with Basic Science shelf and Step I results
  - o get faculty suggestions for improvements
  - o discuss any changes in the course
  - o consider changes to textbooks
  - o finalize the course schedule
  - o remind faculty to revise objectives, update lecture notes and reading assignments, review test items.

### **Two weeks (minimum) before the course**

1. Submit final, proofread, version of updated course materials (course policies, schedule, objectives, reading assignments, lecture notes) to Jackie Foster for duplication and distribution. This completes your course syllabus.

### **One week (minimum) before the course**

1. Submit revisions of course website materials (syllabus, presentations, etc.) for web posting.

### **If your course includes case-based small groups or multidisciplinary conferences**

1. Meet with faculty to choose cases. Complete or assign the write-up of the student handout (case details and questions), and the facilitator script and instructions. Identify slides and other appropriate audiovisual material that illustrate the case, and prepare a slide key.
2. The Office of Medical Education may be able to help identify cases and supporting materials. Cases from previous years and a bank of pathology slides are available.
3. Three weeks before the small group or conference, send us supporting material that needs to be scanned into computers or otherwise manipulated.
4. One week before the small group or conference, all materials should be proofread, corrected, and the final version returned for duplication and distribution. The students need these materials well in advance to prepare the cases. If you prefer to distribute the student handouts with the course syllabus, final copies should be submitted with the other course materials two weeks before the start of the course.

### **Before a quiz**

1. Work with Jackie Foster to ensure that all quiz items, with answers, have been submitted in electronic format (i.e., word processor file or e-mail) to the Office of Medical Education for entry into the test item bank.
2. Edit, proofread and return a corrected copy of the quiz at least 48 hours before the quiz.

### **Before an exam**

1. Work with Jackie Foster to ensure that all items, with answers, have been submitted in electronic format (i.e., word processor file or e-mail) to the Office of Medical Education for entry into the test item bank.
2. Jackie Foster will send you a mockup of the exam.
3. Four or five days before the exam, meet with course faculty and the component director to review the test to address errors and verify the balance of exam content. Jackie Foster can help schedule this meeting.
4. Early on the last working day before the exam, at the latest, return the final corrected version of the exam.

### After a quiz or exam

1. On the afternoon of the exam, the Medical Education staff will have the preliminary exam results and item analysis. Please be available to review this item analysis to pick up any problems with the answer key BEFORE the key is made available to the students.
2. Within a week of the end of the course, Jackie Foster will schedule a meeting among the course director and appropriate course faculty, the component director, and student representatives to consider student comments on the exam questions. Please plan on being available for this meeting.

### After the end of the course

1. Jackie Foster will prepare the final course Gradebook on Blueline and use the School of Medicine policy to set the Honors cutoff. Before making the final grades available to students, she will contact you to verify the grades. Please be available for consultation during this time period.
2. Review the results of the course evaluation after the Office of Medical Education delivers them.
3. Within two months, prepare an annual report for the Evaluation Committee, as described in the Guidelines for Course Directors.

## Academic Computing

The Office of Academic Computing for the School of Medicine provides information technology support services to medical students and faculty through the Office of Medical Education. A complete list of services is provided at the OME: Academic Computing home page:

<http://medschool.creighton.edu/medicine/admin/ome/computing/index.php>

Contact	Role	Phone	Email
Bill Robinson	Director of Medical Simulation Technology, Academic Computing	(402) 280-2902	<a href="mailto:robinson@creighton.edu">robinson@creighton.edu</a>
Steve Maaske	Assistant Director, Academic Computing	(402) 280-3612	<a href="mailto:StevenMaaske@creighton.edu">StevenMaaske@creighton.edu</a>
Alice Smith	Senior Instructional Designer, Academic Computing	(402) 280-3623	<a href="mailto:ALICESMITH@creighton.edu">ALICESMITH@creighton.edu</a>
Judith Gunter	Web Content Manager, Academic Computing	(402) 280-3697	<a href="mailto:JudithGunter@creighton.edu">JudithGunter@creighton.edu</a>

## **Section Two: Resources for Planning a Course**

# Syllabus Template

## Creighton University School of Medicine Syllabus

The purpose of a syllabus is to provide a summary of a course/clerkship/rotation, to list the expectations, and to locate the course within the curriculum.

### COURSE NAME – COURSE NUMBER

**1. Department**

**COURSE DIRECTOR**

**2. FACULTY CONTACT INFORMATION**

Faculty	Department	Phone	e-mail

**3. COURSE GOALS:** the purpose of the course describing the expected educational outcomes in one or two sentences.

**4. Course OBJECTIVES:** the observable student learning performance of knowledge, skills and behaviors achieved by the end of the course expressed in outcome-based terms and classified by Competency:

- Patient Care*
- Medical Knowledge*
- Practice-based Learning and Improvement*
- Interpersonal and Communication Skills*
- Professionalism*
- Systems-based Practice*

**5. COURSE DESCRIPTION**

**6. Learning ACTIVITIES**

**7. SCHEDULE OF Activities: on Blueline**

**8. Student EVALUATION**

		<b>% of final grade</b>
<u>Formative:</u>	Quiz	
	Small Group Exercises	
	Project	
<u>Summative:</u>	Final Exam	

The quiz on **[date]** will cover all material presented through **[date]**. The final exam on **[date]** is cumulative. The quiz and final exam will reflect the objectives as covered in lectures, labs, small groups, multi-disciplinary conference and reading assignments.

**9. GRADING POLICY:** Final course grades are Honors (SH), Satisfactory (SA), or Unsatisfactory (UN):

**Honors (SH)**

The student performs exceptionally well as defined by the criteria for honors in the course syllabus. Typically those students in the top 10% of the class will receive a grade of SH.

**Satisfactory (SA)**

The student completes all course requirements in a satisfactory manner as defined by the course syllabus.

**Unsatisfactory (UN)**

The student fails to meet the minimum requirements for a course, clerkship, or elective as defined in the syllabus or

- 1. attains an overall course average less than 65%, or
- 2. attains an overall course average of 70% AND has previously received a grade of UN and/or a temporary grade of I (i.e., the student had a final course average between 65-69%) in two or more courses in that Component.

**Incomplete (I)**

A student may temporarily receive a grade of Incomplete (I) if he/she:

- 1. has a final course average between 65-69% and is eligible to take a make-up examination before receiving a final course grade. A student is eligible to take make-up examinations in a maximum of two courses per academic year. The Advancement Committee determines if a student is eligible to take a make-up exam.
- 2. has failed a Component III NBME Subject Examination once and is eligible to take a second NBME Subject examination before receiving a final course grade.
- 3. has been granted an extension to complete course requirements (e.g., OSCE, H&Ps, written assignments, etc.)

The grade of Incomplete (I) is changed to Satisfactory (SA) when the student satisfactorily completes all required work, including makeup examinations, for the course, clerkship, or elective within the time granted for the extension. If the student has not completed the required work in a satisfactory manner within the time granted (in no case later than one year after the completion of the original course), the Incomplete (I) is changed to Unsatisfactory (UN).

**10. STUDENT EVALUATION OF COURSE AND FACULTY:**

You will have an online opportunity to evaluate the course and course faculty after the course ends. Constructively evaluating the curriculum ensures the best possible education for current and future students. We need your professional opinion of the curriculum and teachers to continually improve our education program.

**11. TEXTBOOKS**

All reading assignments are meant to be **preparatory** for lectures and should be read before class.

TITLE	AUTHOR	EDITION	CHAPTER

**12. ONLINE RESOURCES:**

Use this checklist to ensure that you have all the necessary information in your syllabus.

SOM Policies

**LECTURE HANDOUTS AND OBJECTIVES**

Each lecture should have a handout that contains a list of objectives.



## Writing Course Goals and Objectives

Establishing goals and objectives for learning is an important part of designing curricula. Learning objectives should be linked to medical school competencies, course goals, instructional strategies, and assessment methods. Learning objectives should be brief statements of observable and measurable outcomes. They should be specific and clear and address a single skill or content area. Addressing these criteria will improve assessment of student learning.

A common guideline for writing learning objectives is known by the acronym SMART. This reminds us that learning objectives should be:

**Specific**  
**Measurable**  
**Attainable**  
**Results-Focused**  
**Time-Focused**

Another variation of the SMART acronym states that objectives should be: specific, measurable, acceptable to the instructor, realistic to accomplish and time-limited (i.e., have a deadline).

### The Three Components of a Good Objective

A learning objective typically has three components: the timeframe for learning the skill or content, an action verb, and a single content area. The statements are learner-centered and usually begin with a phrase that describes the timeline for learning the skill or content, such as “At the conclusion of this course the learner will...” The next component, the action verb, should clearly illustrate what the learner will be able to do after learning the content or skill. For example, “At the conclusion of this course, the learner will be able to differentiate between...” Avoid vague verbs such as “know” or “comprehend.” Objectives developed around these verbs will be difficult to assess. The final component, the content area or skill, should be linked to the design, purpose, and content of the course.

When selecting the action verb, consider the level of cognitive understanding required of the learner. This information can be found in frameworks for educational objectives that identify levels of understanding and appropriate objectives.

### Frameworks for Educational Objectives

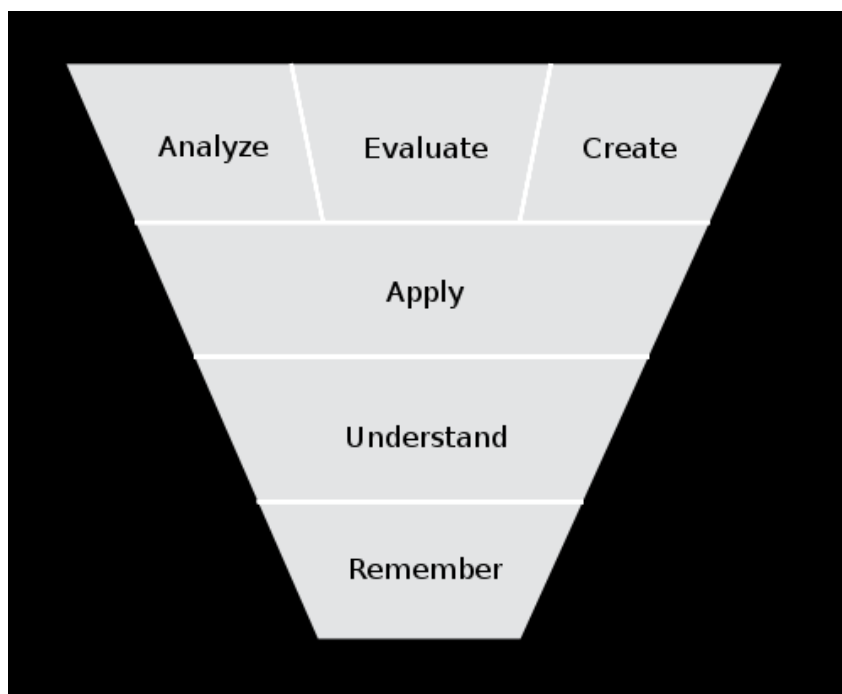
There are several well-known frameworks for educational objectives that can assist faculty who design courses, construct syllabi or create assessment tools. The most well-known framework was designed by Benjamin Bloom and his colleagues in 1956 and is often referred to as simply “Bloom’s Taxonomy.” More recently, Anderson and Krathwohl revised and extended Bloom’s work. Biggs (1999) offers another useful framework known as SOLO: Structure of Observed Learning Outcomes.

Bloom's Taxonomy of Educational Objectives I: Cognitive Domain (1956)  
Anderson and Krathwohl's Revision of Bloom's Taxonomy (2001)  
Biggs SOLO: Structure of Observed Learning Outcomes (1999)

## Bloom's Taxonomy of Educational Objectives I: Cognitive Domain (1956)

Bloom and his colleagues introduced a framework composed of lower-order thinking skills (Levels 1-3) and higher-order skills (Levels 4-6).

- Level 1: Knowledge (Recall and repeat information)
- Level 2: Comprehension (Interpret and demonstrate understanding)
- Level 3: Application (Apply acquired knowledge to a new problem)
- Level 4: Analysis (Identify relationships and motives)
- Level 5: Synthesis (Assemble facts into a coherent or new pattern)
- Level 6: Evaluation (Use criteria and evidence to make and defend judgments)



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## Anderson and Krathwohl's Revision of Bloom's Taxonomy (2001)

- Lower-order skills: Remember
- Understand
- Apply
- Analyze
- Evaluate
- Higher-order skills: Create

## **Biggs SOLO: Structure of Observed Learning Outcomes (1999)**

The structural levels of SOLO are:

Prestructural: Student does not identify the objective

Unistructural: Identify, complete simple procedures

Multistructural: Enumerate, describe, list, combine, do algorithms

Relational: Compare/contrast, explain causes, analyze, relate, apply

Extended abstract: Theorize, generalize, hypothesize, reflect

### ***For references and additional information, please see:***

Anderson, L.W. & Krathwohl, D.R. (Eds.). (2001). A taxonomy of learning, teaching, and assessment: A revision of Bloom's taxonomy of educational objectives. New York: Longman.

Biggs, J. (1999). Teaching for quality learning at university. Philadelphia: Buckingham.

Bloom, B.S. (Ed.). (1956). Taxonomy of educational objectives, handbook I: Cognitive domain. New York: Longmans, Green. Bloom, B.S., Englehart, M.D., Furst, E. J., & Krathwohl, D.R. (1956). Taxonomy of educational objectives: Cognitive domain. New York: McKay.

Krathwohl, D., Bloom, B.S., & Masia, B. (Eds.). (1964). Taxonomy of educational objectives, handbook II: Affective domain. New York: McKay.

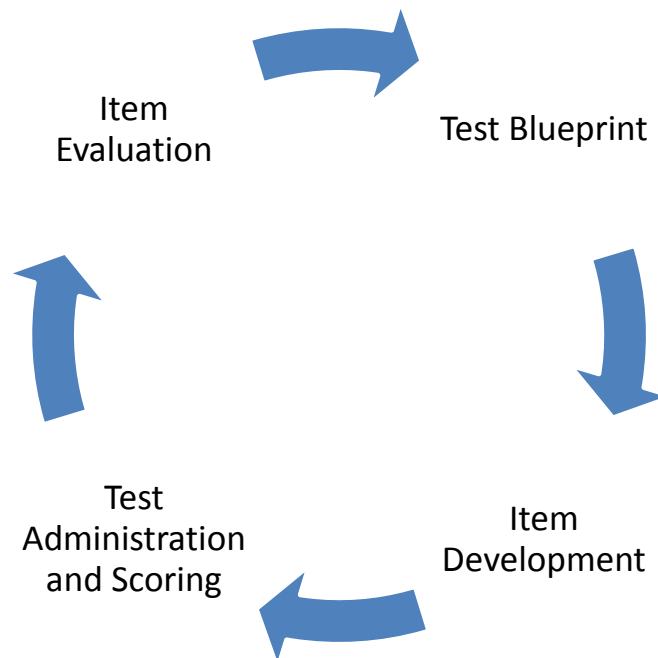
*The Guide to Writing Effective Goals and Objectives for Learning was developed by Kathryn Huggett, Ph.D., Director, Medical Education Development and Assessment at the Creighton University School of Medicine.*

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## The Testing Process

Developing effective tests is critical to assessing student learning. However, writing test items and composing a test are just one stage of the testing process. A well-constructed examination begins with a plan or blueprint that maps course and lecture learning objectives to examination items. This mapping or blueprinting stage enables faculty to assess whether the examination addresses the intended course concepts, contains an appropriate number and distribution of examination items, and that the items correspond to the level of difficulty or degree of emphasis in the course. After the test is developed and administered, the next stage is item evaluation. At this stage, the course director and course faculty evaluate the validity and reliability of the assessment. This can be accomplished by examining the overall performance of the class and also individual student performance on the examination and specific items.



## Writing Multiple Choice Questions

Writing high-quality test items begins with clearly-defined objectives for learning. The traditional multiple choice question (MCQ) format is the One-Best-Answer question, consisting of a single question with one best answer. This is one of only two formats (see below) used by the USMLE for the Step I examination.

The National Board of Medical Examiners provides an excellent document, The Guide to Constructing Written Test Questions for the Basic and Clinical Sciences. It is available here: <http://www.nbme.org/publications/item-writing-manual.html>. The following information is drawn from this guide.

### A Primer on Writing MCQs

#### Anatomy of the MCQ

- Stem: Contains the text
- Options: All answer choices
- Key: The correct answer
- Distractor: The incorrect options

Items should focus on important concepts and assess the application of knowledge – NOT recall of an isolated fact.

#### Test Item Formats

- DO NOT use true/false items
  - The NBME has completely stopped using true/false formats on its exams.
  - It may seem easier to write T/F questions than one-best-answer questions, but attempting to reduce ambiguity leads to testing recall only.
- DO NOT use negative A-type questions, e.g., “Each of the following is correct EXCEPT...”
- DO use one-best-answer items

#### Essentials for One-Best-Answer Items

- Invest in the stem: Ask a clear question!
- Include language in the stem instead of repeating it in each option
- Do not use negatively phrased items
- Do not use vague (e.g., many) or definitive (e.g., always) language
- Do not make the key longer than the distractors
- Answer options should use parallel grammatical structure
- Distractors must be plausible – use words familiar to students
- Order options in logical order (e.g., alpha or numeric)
- If you use “none of the above” use only when answers can be absolutely correct (e.g., historical date, math)

Resource: National Board of Medical Examiners. (2001). Constructing written test questions for the basic and clinical sciences. Philadelphia: NBME.

## Test Question Formats for M1 and M2 Quizzes and Exams Creighton University School of Medicine

While we welcome essay-type questions (from lecturers who are willing to grade them), most of our exams consist solely of objective questions. Writing items that are discriminating, reliable, and efficient is difficult and time-consuming. Fortunately, the NBME has done a lot of research on the types of objective questions that are most effective. After fifty years of experience, they have chosen only **two types** to use on the Medical Licensing Exams. Both of these require the student to choose the **single best answer** from the options given. The two subtypes are the multiple choice questions (which they call *Type A*) and Extended Matching (*Type R*) items. These are the two types used on quizzes and exams at Creighton University School of Medicine. Examples of each are printed at the end of this document. The NBME's excellent guide to item construction, a 181 page Adobe Acrobat file, is free for download at <http://www.nbme.org/publications/item-writing-manual-download.html>

### **Guidelines for One-Best-Answer Items**

- Create a well-written stem (e.g., clinical case presentation)
- Ask a clear, focused question in the stem (avoid "Concerning topic X,")
- Include language in the stem instead of repeating it in each option
- Use parallel grammatical structure in the answer options
- Use plausible distractors – use words familiar to students
- Arrange answer choices alphabetically or numerically
- Supply measurement units for laboratory values – use standard units
- Use generic names for drugs
- Please do not use
  - negatively phrased items
  - vague (e.g., many) or definitive (e.g., always) language
  - correct answers obviously longer than the distractors
  - distractors with double options (“A & C”) unless all the options are double
  - none of the above” as a distractor
  - "of the following" in the stem of each question

### **These question formats are no longer used by the NBME :**

- Please do NOT use true/false items. The NBME has completely stopped using true/false formats on its exams. True/false questions may seem more challenging, but attempting to reduce ambiguity leads to testing recall only.

- Please do NOT use a stem followed by options where one or more may be correct. Although these Type K questions appear to test in-depth knowledge, research has shown they are less discriminating, less reliable, and less efficient -- and sometimes they demonstrate a “cueing” effect.
- Please do NOT use negative Type A questions, e.g., “Each of the following is correct EXCEPT...”

**Items should focus on important concepts and assess the *application* of knowledge – NOT recognition of a term or recall of an isolated fact.**

### **Examples of Effective Test Item Formats**

#### ***Type A (self-contained multiple choice question)***

A 26-year-old man who is HIV positive has a CD4+ T-lymphocyte count of 250/mm<sup>3</sup> (N>500). After 5 weeks of therapy with a nucleoside polymerase inhibitor and a protease inhibitor, he feels weak and is easily fatigued. His hemoglobin concentration has decreased from 12.8 g/dL to 8.2 g/dL. Which is the most likely cause of the anemia in this patient?

- (A) Decreased formation of erythrocytes
- (B) Folic acid deficiency
- (C) Increased formation of erythrocyte antibodies
- (D) Increased fragility of erythrocytes
- (E) Iron deficiency

#### ***R Type (One set of choices used for several questions).***

- |   |  |
|---|--|
| A. Acute leukemia                               | H. Hereditary spherocytosis                |
| B. Anemia of chronic disease                    | I. Hypothyroidism                          |
| C. Congestive heart failure                     | J. Iron deficiency                         |
| D. Depression                                   | K. Lyme disease                            |
| E. Epstein-Barr virus infection                 | L. Microangiopathic hemolytic anemia       |
| F. Folate deficiency                            | M. Miliary tuberculosis                    |
| G. Glucose 6-phosphate dehydrogenase Deficiency | N. Vitamin B12 (cyanocobalamin) deficiency |

For each patient with fatigue, select the most likely diagnosis.

1. A 19-year-old woman has had fatigue, fever, and sore throat for the past week. She has a temperature of 38.3 °C (101 °F), cervical lymphadenopathy, and splenomegaly. Initial laboratory studies show a leukocyte count of 5000/mm<sup>3</sup> (80% lymphocytes, with many lymphocytes exhibiting atypical features). Serum aspartate aminotransferase (AST, GOT) activity is 200 U/L. Serum bilirubin concentration and serum alkaline phosphatase activity are within normal limits. **Ans: E**

2. A 15-year-old girl has a two-week history of fatigue and back pain. She has widespread bruising, pallor, and tenderness over the vertebrae and both femurs. Complete blood count shows hemoglobin concentration of 7.0 g/dL, leukocyte count of 2000/mm<sup>3</sup>, and platelet count of 15,000/mm<sup>3</sup>. **Ans: A**

### **What Not to Ask: Examples of Unacceptable Test Item Formats**

Most of the types of questions that we ask that you avoid are variations on the True-False question format. What's wrong with True-False questions? In brief, it's hard to write an unequivocally true statement without making it a simple recall of an isolated fact.

#### **1. True-False question.**

*The sun rises in the East. T F*

To answer a True-False question, the student has to decide how much "truth" the instructor wants. In this seemingly straightforward example, the student may know that the sun rises directly in the East only on the two equinoxes and otherwise rises in the northeast or southeast, except at the North Pole (rises from the south) and South Pole (rises from the north). So the statement is both true and false.

#### **2. "None of the Above"**

*From what direction does the sun rise?*

- A. East
- B. North
- C. South
- D. West
- E. None of the above

Without option E, it would be clear that A is the best answer. Adding "None of the Above" as an option transforms a single best answer multiple choice into a True-False question. Now E represents any better answer, including a precise answer that mentions the equinoxes, North and South Poles etc. Unless one of options (A-D) is a metaphysical certainty, "none of the above" will always be the best answer.

#### **3. Variable number of correct answers.**

*From what direction does the sun rise?*

- A. East
- B. North
- C. South
- D. A & B
- E. A & C
- F. A, B, & C

This format also converts a multiple choice into a True-False question. The student knows that A is a correct answer, but it's not clear whether B and C should also be considered correct (to account for the South and North Poles).

#### **4. All of the Above.**

*From what direction does the sun rise?*

- A. East
- B. North
- C. South
- D. All of the above.

This type of question is a variation on the "variable number of correct answers" and presents the same challenge to the student. Single best answer questions require the student to choose the BEST answer from the alternatives given. Even if the student believes that none of the answers is perfect, he or she can still pick the best of the alternatives. On the other hand, True-False questions require the student who knows the subject well to guess the level of precision the instructor is seeking.



We also ask you to avoid types of questions that tend to end up confusing students as they try to answer them. These include:

### **5. Choose the WRONG answer.**

This type of question usually contains the words EXCEPT or NOT in the stem:

*All of the following appeared in my lecture notes EXCEPT  
or Anti-thrombin III does NOT have the following characteristic:*

Picking out the wrong answer is counter-intuitive; as they move through the distractors, students often forget that they are looking for the worst answer and reflexively choose the best answer, as they are (correctly) used to doing. An extreme example of confusion occurs when a negative stem is paired with a negative statement in the choice (a double negative) or with "None of the above".

### **6. Unfocused Question.**

*The sun*

- A. is 150 million kilometers from Earth*
- B. is brighter as it rises than as it sets.*
- C. rises in the East*
- D rises at 6 AM*

To choose the best answer, students must be able to compare the truth of one choice with each of the others. If all of the choices address the same idea, this can be done. However, when the choices are heterogeneous, it is difficult to make this comparison, especially when a student finds the statements to be partially correct but not absolutely so.

### **7. Grammatically Faulty Questions**

Grammatical problems crop up when the question writer forgets the stem after running out of ideas for the distractors. This type of question often starts off ok, then falls apart:

- In a well written multiple-choice question, the stem contains*
- A. most of the information necessary to answer the question.*
  - B. a negative, such as NOT or EXCEPT, in bold uppercase letters.*
  - C. there should be no more than two incorrect distractors.*
  - D. students should be reminded to choose the one best answer.*

Choices C and D do not grammatically complete the sentence in the stem. The student has to try to rewrite the question before answering it. (By the way, the correct answer is A).

*Developed by the Office of Medical Education at the Creighton University School of Medicine*

## Interpreting Test and Exam Statistics

Planning, administering, and scoring an examination are familiar tasks to most course directors. However, analyzing students' performance on the examination and interpreting the item and exam statistics are often overlooked as important sources of information that can be used to improve future iterations of the course and examinations.

It is important to examine both the reliability (i.e., consistency) and validity (i.e., did you assess or measure what you intended) of the examination and its components. The reliability of a test is important because it allows you to determine if a student's performance was due to ability or measurement error. A potential source of measurement error is the test itself, including poorly-written items and unclear instructions. Identifying and eliminating sources of measurement error is necessary to improving the overall reliability of the examination. Increasing the number of items can also improve reliability; as the number of items increases, the percentage of measurement error decreases. Ensuring the reliability of the examination also helps to ensure validity. Validity is the most important consideration, but a test cannot be valid if it lacks reliability.

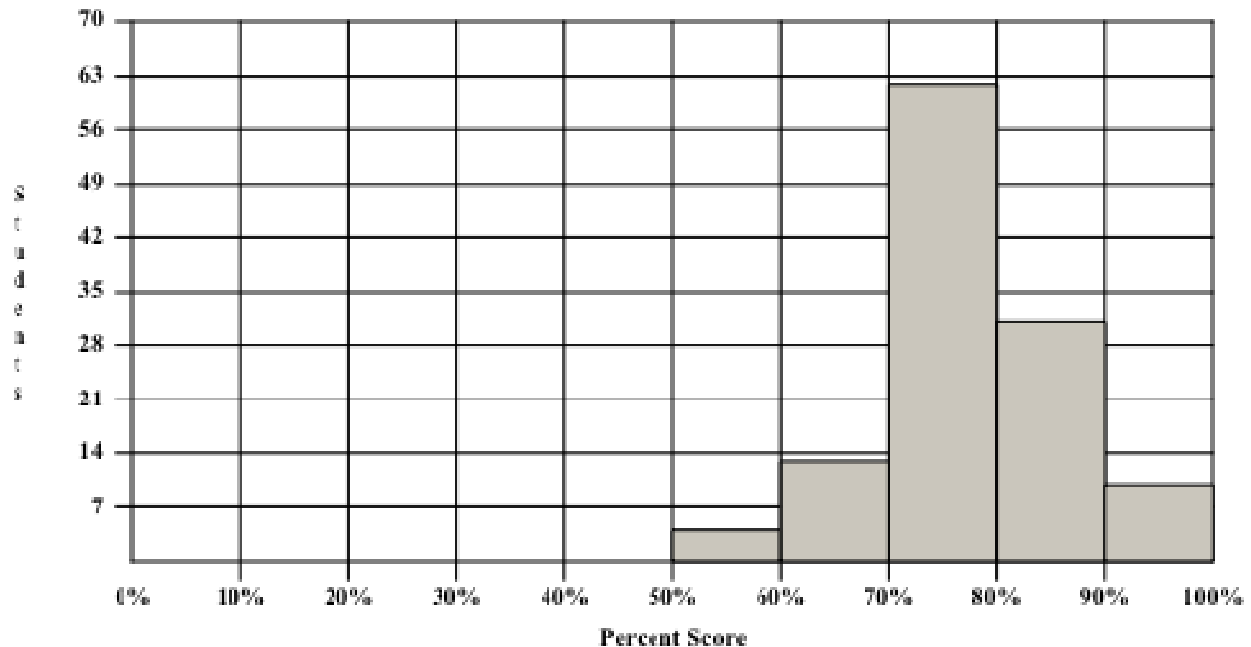
Definitions of key terms used in reliability and validity analysis are provided in the next section, along with examples and instructions for interpreting the item analysis report provided to faculty at Creighton University School of Medicine.

## Evaluation of Examination Statistics Reports

(Adapted from explanation by Ronald J. Markert, PhD)

After each exam or quiz you will receive a test statistics report similar to this of the 2007 Cardiovascular System Final Examination:

**TEST STATISTICS REPORT**  
for Cardio\_Final\_Exam\_F07 from 07F-M2-CAR-FINAL-SCORES-MAKEUP



<i>Statistics in points</i>		
Test Name:	Cardio_Final_Exam_F07	
Test Date:	11/12/2007	
Number of Examinees:	120	
Number of Items:	104	
Maximum Possible Points:	104.00	
Highest Score:	97.00	(93.27)
Lowest Score:	55.00	(52.88)
Median:	81.00	(77.88)
Mean:	81.01	(77.89)
Standard Deviation:	8.82	
Test Reliability:	0.82	
Standard Error of Measurement:	3.73	

*Statistics in %*

This output shows that the examination was a 104-item test taken by 120 students. The *mean* and median were nearly identical at 77.89% (81/104). The Test Reliability was 0.82 and the standard error of measurement was 3.73.

**Mean.** It is reasonable to aim for a mean of 80% on most medical school tests. Thus, the mean of 78% on the exam was a bit low.

**Test Reliability.** This is a measure of the internal consistency reliability (ICR) of the test and is the most important statistic in evaluating an examination. The *Kuder-Richardson 20 test reliability* statistic ranges from 0.00 to 1.00. For our medical school tests we should strive for a minimum of 0.50, and 0.70 is an admirable goal. National exams (e.g., USMLE Step 1) have the resources and circumstances to generate ICRs greater than 0.90.

You can think of internal consistency reliability in two ways. **First**, it is the ability of a test to measure a single factor (which we assume is mastery of the course material). The Test Reliability of 0.82 is good (in comparison with most medical school tests) and says that the exam does a good job of measuring a single factor. **Second**, it is an index of how well a test measures the different knowledge levels of students. In regression analysis terms we would say that the Test Reliability of 0.82 accounts for 82% of the variance (individual difference in knowledge) among students. The remaining 18% of the variation among students is unaccounted for and could be due a number of factors – e.g., a test blueprint not completely representative of course content, some poorly constructed test items, distracting test conditions, random error.

**Standard Error of Measurement (SEM).** This is a measure of the precision of an individual test score. Using normal distribution methods, we can construct a confidence interval for an individual student's score (i.e., score  $\pm$  2 SEM). Our software reports SEM in number of questions rather than %. For the Cardiovascular exam the SEM was 3.73 of 104 items. Lets round it to 4. If a student had 85 of 104 items correct and the SEM was 4, then we can be 95% confident that his/her so-called true score is between 81 and 89, or, in percent terms, 78% and 86%.

You can now see that we should be cautious interpreting medical student exam scores. Even with a fairly reliable exam, the confidence band for one student on one test can be quite wide. Thus, a final principle: **the more reliable the test (look at the test reliability), the more precisely we can estimate a student's score.**

#### *Constructing a test and the number of test items*

Keep three things in mind when constructing a test and determining the number of test items on your exam:

1. Most importantly, use a test blueprint to make sure your exam matches your objectives and course content as well as the emphasis placed on various topics.
2. Everything else being equal, the more items on an exam, the more reliable the test and thus the more precise a student's score. Of course, there are some practical constraints on test length.
3. Think of the reliability of a test (and the precision of a student's score) as the sum of all the test item discriminations.

Our software calculates the point biserial correlation as the measure of discrimination (see below). The point biserial correlation expresses the relationship between a test item and the total test. Correlations range from  $-1.00$  to  $+1.00$ . A positive point biserial

correlation means that students scoring high on the total test answered this item correctly more frequently than low-scoring students – i.e., the item “discriminates” between high-scoring students and low-scoring students. Conversely, a negative correlation, or negative discriminator, may indicate an item-writing flaw since low-scoring students did better on the item than high-scoring students.

Now the bottom line about the relationship between reliability, precision of a student’s score, and item discrimination: **items with positive discrimination contribute to test reliability, items with zero discrimination (all students get it correct) are neutral, and items with negative discrimination lower test reliability.** Items of moderate difficulty (e.g., half to three quarters answering correctly) generally are more discriminating. (Please note that I am NOT endorsing the elimination of test items that all or nearly all students get correct. Some content is so critical we want and expect near perfect performance).

## Interpreting The Item Analysis Report

The statistics you receive after an exam will look something like this:

An experienced mountain climber is trying to scale Mount Everest without supplemental oxygen. To obtain more oxygen, she is hyperventilating and has now reduced her  $P_aCO_2$  to 18 mmHg. At her current altitude the barometric pressure is 347 mm Hg. What is her approximate  $P_AO_2$  in mm Hg?

- A. 20
- B. 40
- C. 60
- D. 80
- E. 100

RESPIRATORY-BERGREN 233		← Question ID							
I →	19	II →	0.68	0.00	0.02	<b>0.68</b>	0.22	0.05	0.02
	MCS	III →	80.17	0.00	71.54	<b>80.17</b>	75.09	69.11	68.29
	1.00	IV →	+0.376	-	-0.121	<b>+0.376</b>	-0.187	-0.238	-0.182
			Overall	Not Answered	A	B	C	D	E

The **Question ID**: a unique identifier of the question in the bank

I - the question number on the exam.

II- this row gives the proportion of students who chose each of the alternative answers. The statistics for the answer choices are arranged in columns. As labeled at the bottom, the first column is the *overall* statistics for the question, which for a single answer multiple-choice question are the same as the statistics for the correct answer. The second column is statistics for students who left the item blank (none in this example). Columns 3-7 are the statistics for each of the answer choices A-E. For example, in this question, 68% of the students chose the correct answer B - which is bolded. The usual overall test mean is about 80%. So, a question that 80% of the students get right could be considered a question of average difficulty. While we are always pleased when a question is answered correctly by the whole class (1.00), a question that between 60 and 90% answer correctly is probably pitched about right to challenge the students. In this case, some students chose each of the four incorrect answers (2% chose A, 22% chose C, 5% chose D, and 2% chose E). This indicates that all of the distractors were credible, which is what we aim for.

III- this row is the *overall average on the exam of the students who chose each answer*. For example, in this question the average of students who chose the correct answer B is 80.17%, while the average of students who chose incorrect answer A is 71.54%, and those who chose C 75.09%, etc. If the test has high internal consistency reliability (as discussed above), and if the test as a whole is a good measure of mastery of the course material, the students who got this question right should have a higher overall mean on the exam than those who got it wrong. A good question has a wide separation between the average of those choosing the correct answer and those choosing incorrectly.

**IV-** the bottom row is the *point biserial* value for each possible choice, which is a statistical approach to the same idea as the previous row. Correlations range from -1.00 to +1.00, although it is rare to see a question above +0.5; in this example it is +0.376. Dr. Gorby gave an excellent explanation of this statistic to his course faculty as follows:

This can tell us something about the ability of the question to distinguish "good" from "not so good" students. My simple-minded understanding of this follows. If the point biserial of the correct answer has a positive value, this means that students who performed well overall on the test tended to get this question correct but students who did poorly on the test tended to get this question incorrect. In other words a question with this characteristic is able to discriminate the better students from the not so good students. The more closely the value approaches 0.5, the better. Values close to 0 imply that a particular question was not especially good at identifying the students that performed well on the test vs. those who did not. Negative values mean that poor-performing students got the question correct while the good students missed it. Some "hard" questions that few students got correct can have an excellent point biserial because only the most knowledgeable students overall got the question right. Also, one would expect that an "easy" question which most students got right would have a point biserial close to 0, because that question really didn't distinguish between high- and low-performing students.

Each test should have some hard questions and some relatively easy ones to provide some degree of separation between students' test performances. However, if a question is "hard" (i.e., few students got it correct) and the point biserial is close to 0 or negative, there may be something wrong with the way the question is stated or in the way the material was presented in class or on the slides. If any of your questions have these undesirable characteristics, please look them over, and think about modifying them, not using them, or presenting the material differently in subsequent years.

## **Section Three: Resources for Evaluating a Course**



## Overview of the CUSOM Online Curriculum Evaluation System

Student feedback on the curriculum is an important aspect of the curriculum evaluation and management system at Creighton University School of Medicine. Students are encouraged and expected to evaluate all aspects of the curriculum. Specifically, the document “Medical Professionalism at Creighton University School of Medicine” states: “students are responsible for maintaining and improving the quality of teaching by constructively evaluating the curriculum to ensure the best possible education for current and future students.” Student feedback is used by the school’s Evaluation Committee, and the Liaison Committee on Medical Education (LCME) requires that schools’ assessment of program quality consider student evaluations. To ensure timely and efficient evaluation, web-based applications have been developed for online evaluation of all courses and clerkships. Additional detail about evaluation strategies for each year is provided below.

### **Student Access to Online Course Evaluations**

**M1:** In the first year of medical school, time is reserved on the students’ calendar for the mandatory *Let’s Evaluate* session. Students complete their course evaluations at three points during the academic year: 1) end of fall semester, 2) mid-term of spring semester and 3) end of spring semester. All M1 evaluation sessions are conducted in the computer lab or via a link to the evaluation website.

**M2:** In their second year, students complete course evaluations after each course. Students receive an email notice that the course evaluation is open, and are instructed to complete the evaluation by a stated deadline.

### **Faculty Access to Online Course Evaluations**

Not only are students able to complete their evaluations online for all four years of medical school, but faculty and administration are also able to view the reports online. The level of participation in the course (i.e., course director or lecturer) determines the level of access to evaluation data. The instructions for accessing and viewing the evaluations are provided below.

## Instructions for Accessing Course and Clerkship Evaluation Data

### Component I (M1) & Component II (M2) Course Evaluations

1. Go to: <http://www2.creighton.edu/medschool/medicine/admin/ome/evaluations/index.php>
2. To view M1 and M2 courses, click on the first bullet after *Faculty, to view evaluations, please click the appropriate link:*

To complete/review Evaluations, please click the appropriate link.

Students, to complete evaluations, please click the appropriate link.

- Component I (M1) Course Evaluations
- Component II (M2) Course Evaluations
- Component IV (M4) Elective Evaluations

Faculty, to view evaluations, please click the appropriate link.

- Component I (M1) & Component II (M2) Course Evaluations.
- Component III (M3) Clerkship Evaluations from 2002/03 to 2005/06.
- Component III (M3) Dimensions of Clinical Medicine Evaluations from 2002/03 to 2005/06.
- Component IV (M4) Elective Evaluations

For **HELP** on the evaluation login procedures, please click [here](#).

For a guide on interpreting the evaluations, please [click here](#).

3. Log in using your Creighton NetID and Password. (Those without a Creighton account are able to access the evaluations through a "guest account." Please contact [katistas@creighton.edu](mailto:katistas@creighton.edu) for additional information.)



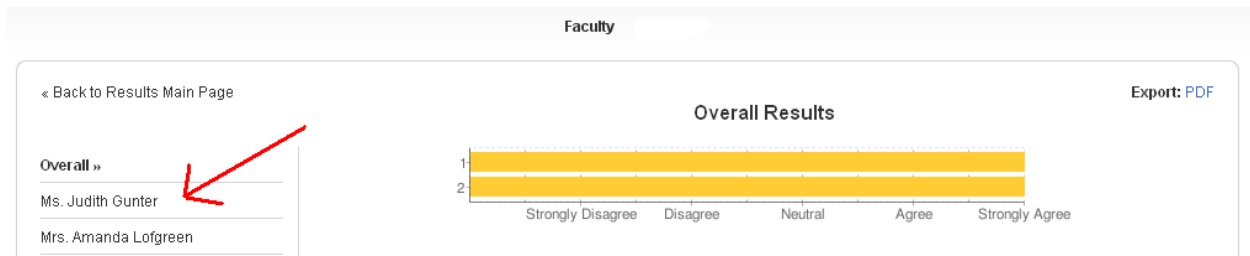
4. To view evaluations from 2008-2009 forward, click on the title under **Course**. Depending on your role in the course, you will have one or more options under **Evaluation Type**, e.g.: “Course” and/or “Faculty” and/or “Small Group”.

a. Under “Course” you will see students’ ratings for the course.

Logged in as: asl36426  
 To view Evaluation Results Prior to Fall of 2008 Click Here >>

Academic Year (select one)	Course (select one)	Evaluation Type (select one)
2008-2009	Anatomy (IDC103)	Course
	Behavior Medicine II (IDC243)	Faculty
	Cardiovascular System (IDC201)	Lab Only Faculty
	Ethics and Legal Topics in Clinical Medicine (IDC135)	Study Group
	Hematology-Oncology (IDC207)	
	Infectious Diseases (IDC233)	
	Interviewing & Physical Exam (IDC136)	
	Molecular & Cell Biology (IDC101)	

b. Under “Faculty” and “Small Group” you will see the Overall Results first. **To see your individual results, click on your name to the left.**



5. To view your evaluations from previous years, click on “here” in *To view Evaluation Results Prior to Fall 2008 Click Here>>* on the home page:

Logged in as: asl36426  
 To view Evaluation Results Prior to Fall of 2008 Click Here >>

Academic Year (select one)	Course (select one)	Evaluation Type
2008-2009	Cardiovascular System (IDC201)	

## **A Guide to Interpreting M1 and M2 Student Evaluations**

Evaluations for most M1 and M2 courses consist of three components: Course, Faculty, and Small Group. Depending on your teaching responsibilities in a course, you will have access to varying levels of evaluation data. For example, a Course Director will have access to ratings and comments for all of the evaluations within the course. A faculty member who lectures in the course will only see his/her lecture evaluation and the course overall ratings. Additional detail about the evaluations is provided in the next section.

**Course Evaluation.** For each M1 and M2 course, there is a set of core items, which are used to calculate the Overall Mean. Some courses have added supplemental items, which are not included in the Overall Mean. Students are asked to evaluate each of these items on a 5-point Likert Type Scale where 5 = *Strongly Agree*, 1 = *Strongly Disagree*, and 3 represents a *Neutral* response. Students are also asked to answer two open-ended questions: *What are some areas where this course could be improved?* *What did you like best about this course?* Faculty members within the course have access only to the summary of the rated items; whereas Course Directors have access to the comments as well.

Average of students' ratings where  
 5 = *Strongly Agree*  
 4 = *Agree*  
 3 = *Neutral*  
 2 = *Disagree*  
 1 = *Strongly Disagree*

Number of students who rated each item.

Number of students who selected this rating (Percentage of the number of students who selected this rating/ total number of students who answered this item)

For this example, 44 (46% of 96) students selected *Strongly Agree* for item 1.

Average of all the core items

The *Standard Deviation* statistic is the deviation of each response from the mean. A small Stand Dev means that responses were close to the mean; whereas a large Stand Dev means that the responses were more spread out among the response options.

Average of the supplemental item; not included in the OVERALL MEAN.

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Responses	Stand Dev
1	This course was well designed and organized.	44 (46)	40 (42)	8 (8)	4 (4)		4.29	96	0.79
2	The course syllabus was well organized and an accurate guide to course requirements.	43 (45)	44 (46)	8 (8)	1 (1)		4.34	96	0.68
3	Learning objectives for the course and lectures were clear.	41 (43)	42 (44)	13 (14)			4.29	96	0.69
4	The sequence of course content facilitated my learning.	44 (46)	32 (33)	14 (15)	6 (6)		4.19	96	0.91
5	Course content and examinations items reflected the learning objectives for the course and lectures.	43 (45)	43 (45)	7 (7)	2 (2)	1 (1)	4.30	96	0.78
6	Examination items were well constructed and clear.	35 (36)	42 (44)	11 (11)	7 (7)	1 (1)	4.07	96	0.93
7	Course assignments contributed to my learning.	41 (43)	45 (47)	9 (9)		1 (1)	4.30	96	0.73
8	The electronic resources (e.g., web sites, BlueLine) for this course contributed to my learning.	42 (44)	40 (42)	9 (9)	3 (3)	1 (1)	4.25	95	0.84
<b>OVERALL MEAN</b>							<b>4.25</b>		
9	Supplemental Question 1	41 (43)	42 (44)	13 (14)			4.29	96	0.69

**Faculty Evaluation.** Students are asked to rate each faculty member who lectured in the course on four items, using the same 5-point scale used in the course evaluation. Students also have an opportunity to provide comments for each faculty member. All faculty who lecture within a course will have access to their individual ratings and comments and a summary of the Overall Ratings.

Average of students' ratings where  
 5 = *Strongly Agree*  
 4 = *Agree*  
 3 = *Neutral*  
 2 = *Disagree*  
 1 = *Strongly Disagree*

Number of students who rated each item.

Number of students who selected this rating (Percentage of the number of students who selected this rating/ total number of students who answered this item)

For this example, 58 (65% of 89) students selected *Strongly Agree* for item 1.

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Responses	Stand Dev
1	This instructor was interested in helping students learn.	58 (65)	26 (29)	5 (6)			4.60	89	0.60
2	This instructor communicated at a level appropriate to my understanding.	54 (61)	29 (33)	5 (6)			4.56	88	0.62
3	The learning materials (handouts, audiovisuals, web content, etc.) contributed to my learning.	52 (58)	29 (33)	5 (6)	3 (3)		4.46	89	0.75
4	Overall, this instructor was an effective teacher.	54 (61)	28 (32)	6 (7)			4.55	88	0.60
<b>OVERALL MEAN</b>							<b>4.54</b>		

The *Standard Deviation* statistic is the deviation of each response from the mean. A small Stand Dev means that responses were close to the mean; whereas a large Stand Dev means that the responses were more spread out among the response options.

**Small Group Evaluation.** Students are asked to rate their small group experience(s) on a 5-point Likert Type Scale where 5 = *Strongly Agree*, 1 = *Strongly Disagree*, and 3 represents a *Neutral* response. Students also have the opportunity to provide comments. All small group leaders within a course will have access to a summary of the Overall Ratings and to their individual ratings and comments.

Average of students' ratings where  
 5 = *Strongly Agree*  
 4 = *Agree*  
 3 = *Neutral*  
 2 = *Disagree*  
 1 = *Strongly Disagree*

Number of students who rated each item.

Number of students who selected this rating (Percentage of the number of students who selected this rating/ total number of students who answered this item)

For this example, 52 (55% of 95) students selected *Strongly Agree* for item 1.

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Responses	Stand Dev
1	The small group session(s) helped me integrate the material.	52 (55)	34 (36)	6 (6)		3 (3)	4.39	95	0.87
2	The difficulty of the cases was about right.	48 (51)	42 (45)	2 (2)	1 (1)	1 (1)	4.44	94	0.70
3	Our facilitator was effective at facilitating group discussion.	62 (65)	26 (27)	5 (5)	1 (1)	1 (1)	4.55	95	0.74
<b>OVERALL MEAN</b>							<b>4.46</b>		

The *Standard Deviation* statistic is the deviation of each response from the mean. A small Stand Dev means that responses were close to the mean; whereas a large Stand Dev means that the responses were more spread out among the response options.

**Section Four: School of Medicine Curriculum Management and Policies**



## Curriculum Management System

The School of Medicine has a management system designed to assure a coherent and coordinated curriculum (described in [The Creighton Medical Curriculum](#)). The Associate Dean for Medical Education is the chief education officer for the medical education program. The Educational Policy Committee (EPC) establishes all significant curricular policies. The Medical Education Management Team (MEMT) meets two times each month year round. The committee identifies important areas of need related to the undergraduate educational mission, proposes solutions, and facilitates action through the educational committees and departments.

The MEMT consists of Associate Dean for Medical Education (Chair), Assistant Dean for Medical Education and Director of Medical Education Development and Assessment, Associate Dean for Student Affairs, Associate Dean for the Regional Campus-Phoenix, Assistant Dean for Medical Education for the Regional Campus-Phoenix, Assistant Dean for Student Affairs for the Regional Campus-Phoenix, and the directors of each of the four components (years) of the medical education curriculum.

Each of the four Component Directors oversees the day-to-day management of the educational program and directs Component Committees (composed of Course/Clerkship Directors from a given year of the curriculum). Component Committees regularly review course/clerkship content and grading practices, develop component-wide evaluation and grading policies, and monitor content omissions and redundancies. Course and clerkship faculty are made aware of school-wide policies on curriculum through the Course/Clerkship Director, who sits on the Component Committee. The Course/Clerkship faculty are responsible for policy consistency and curriculum planning, design and implement the course/clerkship, and evaluate students. The Course/Clerkship Director prepares the course/clerkship annual report. The education mission is supported administratively by the Office of Medical Education, particularly for Components I and II, and from both the Office of Medical Education and the academic departments in Components III and IV.

Additional information about the Educational Policy Committee is available through links found at <http://medschool.creighton.edu/medicine/admin/ome/admin/index.php>

**Section Five: Frequently Asked Questions and Contacts**

## Frequently Asked Questions and Contacts

**Q. Who can help me with BlueLine2?**

A. The curriculum coordinators, Cate Pogge and Jackie Foster, can answer questions about BlueLine2 and your course. If you have ideas or questions about how to use BlueLine2 for a new course activity, contact Alice Smith, Instructional Designer.

**Q. Where can I find my course evaluation data?**

A. Online course evaluation data can be found by clicking on “Course & Clerkship Evaluations” on the Office of Medical Education home page or by clicking on the following link:

<http://medschool.creighton.edu/medicine/admin/ome/evaluations/index.php>

Instructions on how to log in as well as interpreting the evaluations can also be found on this page. If you have any questions, please contact [katistas@creighton.edu](mailto:katistas@creighton.edu)

**Q. Where can I learn more about the medical school curriculum?**

A. Each year, the medical school year curriculum is reviewed and approved by the Educational Policy Committee. The document is then posted at the Office of Medical Education home page. You can find the most recent version here:

<http://medschool.creighton.edu/medicine/admin/ome/curriseservices/index.php>

Better still, consider serving as a member of the Educational Policy Committee.

**Q. Who can help instructors load their PowerPoint files in the lecture hall?**

A. If an instructor lets the curriculum coordinator know which computer (Mac or Windows) he/she intends to use, the file will be loaded on the hard drive. A student technology assistant in the class can help the instructor locate the files.

**Q. Is there any way to arrange a parking spot for a lecturer from off-campus?**

A. Yes. Given enough notice the OME can provide a temporary parking pass.

**Q. Aside from the lecture halls and the eleven small group rooms, what other instructional settings are available?**

A. The Medical Education Computer Lab can be used for online instruction, the Clinical Assessment Center provides a clinical setting for clinical skills exercises, and the Laboratory in Criss L-60 has gas, running water, and microscopes, along with tables for group work.

**Q. What options are available for a lecturer who wants to incorporate clickers (Personal Response System) into a presentation?**

A. Clickers are available in Criss lecture halls 252 and 452. Contact Alice Smith, Instructional Designer, for assistance if you would like to use the PRS technology.

**Q. Who can assist an instructor who plans to use audio or video files as part of a presentation?**

A. If an instructor is using multimedia files, it's advisable that the faculty confer with the curriculum coordinators, Cate Pogge and Jackie Foster one week before the lecture to verify that all the necessary helper programs are installed on the classroom computers. The curriculum coordinators can help schedule this at a time when the lecture hall is free to test out the presentation.

**Q. Who can assist me if I would like to use the ELMO in the lecture hall?**

A. The student technology assistant in the lecture hall.

## Appendix

**Annual Course Report**  
**Creighton University School of Medicine**  
**Academic Year -----**  
**Course -----**  
**Submitted by**

Please complete this report and send it to The Office of Medical Education **within 2 months of the completion of your course**. The report will be forwarded to the medical school's Evaluation Committee. Contact your Component Director (Dr. Knoop or Dr. Pisarri) or Dr. Huggett if you need assistance preparing your report.

### *Overall*

1. With what aspects of the course this year were you most pleased? least pleased?

### *Student Performance*

2. Did student scores on tests and other assessment measures meet your expectations? To what do you attribute any deviation from the performance you expected?
3. Was student attendance at lectures, small groups, and other course activities satisfactory?
4. Are you satisfied with the methods for assessing student performance? Did you feel that the students knew what to expect as the course progressed?

### *Student Comments*

5. Please comment on the student evaluations (numerical) of your course.
6. Were there any frequently repeated comments, positive or negative, from the student evaluations? Please comment.

### *Revision of Course Goals and Methods*

7. Would you recommend any change in the course content? For example, is there too much material in the course? Or, conversely, do factors such as time constraints or lack of resources force the omission of important material?
8. Do you see any advantage to changes in the sequence of presentation of the material?

9. Were there any skill or knowledge areas in which the students did not come into your course with the preparation you expected? Conversely, did you notice any unnecessary overlap with other courses?
  
10. Do you plan to change current or introduce new teaching methods? Would there be any benefit to changing the proportion of class time devoted to lectures, small group cases, or laboratory exercises?

*Faculty Performance*

11. Are you pleased with course faculty (a) involvement in planning the course, (b) teaching effort, and (c) contributions to course tests and other evaluation measures?

*Plans for Course Improvement*

12. Will you do anything not mentioned above to change or improve the course?

*Office of Medical Education*

13. Are you pleased with the assistance you receive from faculty and staff in the Office of Medical Education?
  
14. What can the Office of Medical Education or the Educational Policy Committee do to help you and your course?

***Any Additional Comments?***

*After completing your report, please send the file to [katistas@creighton.edu](mailto:katistas@creighton.edu)*

The Annual Course Report form is available online at:

<http://medschool.creighton.edu/medicine/admin/ome/coursedirectors/index.php>