

# Focusing Your Course Syllabus on the Learner

Faculty Development Program  
Office of Medical Education  
Boston University School of Medicine

2005

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## Introduction

The goal of the medical school curriculum is to prepare a student as a professional and skilled medical doctor and is evolving from knowledge-based to competency-based requirements. In response to this change in the curriculum, the course syllabus needs to be written so that the students know how they are progressing toward those competencies. This paper recognizes the necessary components for a learner-centered syllabus.

### What is a Learner-Centered Course Syllabus?<sup>1</sup>

The learner-centered course syllabus presents the course from the learner's perspective and stresses learning knowledge, skills and attitudes to obtain the competencies needed to become a professional medical doctor. In the past, a course syllabus has been provided generally from the instructor's point of view as a study guide for the student telling them what and when the instructor teaches certain topics.

The learner-centered course syllabus provides for the student answers to these questions:

- What will the medical school student learn and be able to do by the end of the course?
- Why should the student learn this material?
- How does the course material promote the student obtaining the competencies to become a professional medical doctor?
- How does this course relate to other courses the student is taking?
- How does the student succeed in the course?

Each one of the syllabus components will be discussed in depth as listed in the following Table of Contents. To understand the switch from an instructional syllabus to a learner-centered syllabus, please review the comparison chart in the Appendix.

### Why do I need to write a Learner-Centered Syllabus?

In accordance with the LCME (Liaison Committee on Medical Education) accreditation requirements, the Boston University Medical School curriculum is increasing the amount of student independent learning time and reducing the amount of contact time in lectures. The result is a change in the amount of time students spend in courses as passive learners in lectures to active learners in small group discussions and self-directed study.

*LCME Standards ED-5: The medical faculty must design a curriculum that provides a general professional education, and fosters in students the ability to learn through self-directed, independent study throughout their professional lives.*

Student independent learning requires that the students take an active role in managing their learning and obtaining the required professional competencies. To do this, students need a learner-centered course syllabus and not a syllabus that only summarizes and lists the course topics and a class schedule. Because the students take a more active role in learning, the instructor's role increases as a facilitator in learning and decreases as a disseminator of information.

The course director/manager/instructor needs to prepare a learner-centered course syllabus to enable the students to:

- recognize how and what they will learn
- link the course content to the attainment of required competencies to becoming a professional medical doctor
- describe what is needed to succeed in the course
- think critically and use evidence to make medical decisions

## How do I write a Learner-Centered Syllabus?

The learner-centered syllabus will be customized for each course, but it will basically have these **12 components:**

- 1. Title Page**
- 2. Table of Contents**
- 3. Contact Information**
- 4. Course Description**
  - A. Importance**
  - B. Link to Medical Competencies**
  - C. Learning Objectives**
  - D. Format**
  - E. Prerequisites**
- 5. Roles and Responsibilities for Learning**
- 6. Schedule**
- 7. Course Content**
- 8. Assignments**
- 9. Tips for Learning**
- 10. Assessment**
- 11. Student Evaluations**
- 12. Learning Resources**

The next section gives the syllabus component in the left column with the student's perspective in parentheses and italics. The description of the syllabus component is provided in the right column.

## 1. Title Page

(*What is the name and date for the course? Who is the Course manager(s) and how do I contact him/her?*)

The title page identifies the "Syllabus" with:

- Syllabus
- The name of the course
- The date (e.g., Fall 2005)
- Course manager(s) name and contact information

In addition to giving the basic course information, the title page sets the tone for the course. You may want to consider what kind of message to send to your students. Do you want to include a picture or an illustration? Also, the type of font you select will characterize the course for the students. The most important factor is selecting a font style that is easily read (12 points).

A formal font (e.g., **Times Roman**) with a serif eases readability and reduces eye fatigue.

A san serif font (e.g., Arial) does not have the extra fine line at the end of the main stroke and requires more space, but it is easy to read. Please avoid a compressed typeface (e.g. Arial Narrow) that decreases the spacing between the letters, reduces readability and prevents clear photocopying.

An informal font such as *Comic Sans* provides a friendlier impression to the course material.

A technical font such as **Courier New** gives a clean and simple line that is good for visual presentations such as charts and graphs.

<p><b>2. Table of Contents</b></p> <p><i>(How do I find information about this course?)</i></p> <p>A Table of Contents assists the student in navigating and accessing the course information as needed.</p>	<p>In the Table of Contents, the syllabus components are listed and aligned to the left with the respective page numbers aligned to the right.</p> <p>Another important component for the Table of Contents is copyright information. List at the bottom of the page a statement regarding the ownership of the intellectual property created by the instructors as well as from outside sources contained in the syllabus and permission to photocopy. The student needs to know how they can use and copy specific material. A good reference for copyrighting is <a href="http://www.copyright.gov/">http://www.copyright.gov/</a> or <a href="http://www.copyright.com/ccc/do/viewPage?pageCode=cr10-n#academia">http://www.copyright.com/ccc/do/viewPage?pageCode=cr10-n#academia</a></p>
<p><b>3. Contact Information</b></p> <p><i>(Who can give me course information not contained in the syllabus?)</i></p> <p>List this contact information for the Course Manager(s) and Administrative Support:</p> <ol style="list-style-type: none"> <li>1. Name and title</li> <li>2. Department</li> <li>3. Office location and hours</li> <li>4. Preferred contact number (phone#, beepers, email, fax, etc.)</li> </ol>	<p>Contact information is very important to the student because it tells the students where to get answers to their questions not provided in the syllabus.</p> <p>Contact information also includes a listing for the Lecturers, Facilitators or Resource People with a description of their areas of expertise.</p> <p>If applicable, give the name and location of the course website as a source of information.</p>

<p><b>4. Course Description</b></p> <p>A. <u>Importance</u> <i>(Why am I taking this course?)</i></p> <p>B. <u>Links to medical competencies</u> <i>(How does this course contribute to my progression toward attaining competency as a medical doctor?)</i></p>	<p>The purpose of this section is to tell the student the value of your course in the “big picture” of the medical school curriculum. How does your course relate to other courses taken in the same semester and how does your course fit into the rest of the curriculum?</p> <p>The medical school student in Boston University School of Medicine should graduate with the following competencies to become a professional and skillful medical doctor<sup>2</sup>:</p> <ul style="list-style-type: none"> <li><b>I. Effective Communication</b> <ul style="list-style-type: none"> <li>a. Engaging/relationship building</li> <li>b. Interviewing/listening</li> <li>c. Educating/teaching of patients, nurses/staff, peers/students</li> <li>d. Counseling/reflection</li> <li>e. Addressing/managing emotions (patient and physician)</li> </ul> </li> <li><b>II. Basic Clinical Skills</b> <ul style="list-style-type: none"> <li>a. History of present illness</li> <li>b. Physical Exam</li> <li>c. Clinical performance procedure</li> </ul> </li> <li><b>III. Using science to guide diagnosis, management, therapeutics, and prevention</b> <ul style="list-style-type: none"> <li>a. Differential diagnosis</li> <li>b. Diagnostic reasoning/clinical problem solving</li> <li>c. Diagnostic and clinical testing</li> </ul> </li> </ul> <p>Medical competencies continued</p>
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Medical competencies  
continued

**IV. Lifelong learning**

- a. Independent learning skills
- b. Searching and critiquing the literature
- c. Using information technology
- d. Recording and presenting
- e. Managing medical information

**V. Self-awareness, self-care, and personal growth**

- a. Personal strengths and weaknesses
- b. Career goals

**VI. Social and community contexts of health care**

- a. The non-biological factors that influence health, disease and disability
- b. The interrelationships of a community and an individual

**VII. Moral reasoning and ethical judgment**

- a. Ethical dimensions of medical practice and legal policy
- b. Patient's commitment to a value system

**VIII. Problem solving**

- a. Recognizes and analyzes a problem
- b. Integrates other abilities to address the problem
- c. Makes a medical decision to solve the problem

**IX. Professionalism and role recognition**

- a. Altruism/patient advocacy
- b. Humanism/compassion/ empathy

Medical competencies continued

Medical competencies continued

### **IX. Professionalism and role recognition**

- c. Scholarly/quality/continuing-lifelong and self-directed learning/personal awareness
- d. Ethical/legal
- e. Community service
- f. Collegiality/interdisciplinary collaboration
- g. Confidentiality
- h. Advocacy in patient and community care

To show the students how the course content relates to the core competencies, you can use a table with the competencies as columns headers and the course topics/assignments as rows:

	I	II	III	IV	V	VI	VII	VIII	IX
1	X		X	X				X	
2	X	X	X	X		X	X	X	X
3			X						
4	X	X	X	X	X	X	X	X	X

See the Appendix for an example of how a course can meeting the core medical competencies.

### C. Learning Objectives

*(What do I need to know in order to succeed in this course?)*

The standard format for a course learning objective is:

1. An introductory phrase ("By the end of the Fall IP-1 small group session")
2. An identification of the learner ("BUSM-1")
3. The behavior to be learned given as an action verb describing an observable performance ("identify ") and the content to be learned ("a patient with asthma")
4. Conditions for learning ("from the case studied")
5. Expected degree of learning ("3 out of 4 symptoms")

A course **Learning Objective** is a clear, concise and specific statement of observable student behaviors that can be evaluated at the conclusion of the learning activities and contributes to reaching the course goal.

It is important to differentiate a course goal and instructional objective from a learning objective.

A course **goal** is a broad statement of learning outcomes.

A course objective or **instructional objective** is a specific statement of teacher-centered performance, whereas a **learning objective** or performance objective is a specific statement of learner-centered performance.

Where applicable, use higher-leveled thinking objectives that require students to apply, analyze, synthesize and evaluate information.

Example of a learning objective:

By the end of the ICM-1 Vital Signs small group session, the BUSM-1 students will be able to demonstrate correctly the Physical Exam task to obtain appropriate vital signs for blood pressure, pulse, breathing and temperature using a sphygmomanometer, stethoscope, thermometer and watch.

1. **Stem:** By the end of the ICM-1 Vital Signs small group session
2. **Learner:** BUSM-1
3. **Action verb:** demonstrate
4. **Content:** obtaining vital signs
5. **Conditions:** using a sphygmomanometer, stethoscope, thermometer and watch
6. **Degree:** correctly

#### D. Format

*(How is the course structured?)*

In the past, courses were assumed to be lectures with a possible lab or discussion group. A curriculum designed to support student learning expands from the lecture format to include small group discussions, problem based learning, simulated exercises, team based learning, off campus clinical sites, CourseInfo, Clinical Skills Center, etc. It would be helpful to provide the amount of expected contact hours in the various learning formats so that the student can schedule their learning time.

#### E. Prerequisites

*(What do I need to know and do before I start this course?)*

This section describes what prior knowledge and skills are necessary to be successful in the course. In addition, the importance of the prerequisite knowledge and skills is explained. If they do not have the prerequisites, the student should be directed to learning resources where they can acquire this knowledge or skills.

Prior knowledge directly relates to a student's ability to acquire and assimilate new knowledge into what already exists in student's mind. Changing incorrect information in a student's base of knowledge is more difficult than acquiring it new. This is the reason it is important to pre-test what the students have in their minds before providing new knowledge.

The syllabus should inform the students of the availability of pre-testing. Pre-testing is done for two reasons:

1. to determine "working knowledge" before learning new information
2. to measure learning as a result of the course information

<p><b>5. Roles and responsibilities in learning</b></p> <p><i>(What can I expect of myself and the faculty in this course?)</i></p>	<p>The syllabus defines the role of the student in learning and gives examples. Depending upon the type of course, the student will be required to:</p> <ul style="list-style-type: none"> <li>• ask questions</li> <li>• challenge ideas</li> <li>• correlate clinical data</li> <li>• attend all sessions</li> <li>• participate actively in small group discussions</li> <li>• reference web pages</li> <li>• complete self-directed study</li> <li>• recognize standards</li> <li>• behave professionally</li> <li>• hand in assignments on due date</li> <li>• other learning activities</li> </ul> <p>In addition, the syllabus states the instructor's role in the course. This may seem obvious to you, but students may assume you to be solely the disseminator of information and not a guide for their self-learning and assessment. Please specify your responsibilities such as:</p> <ul style="list-style-type: none"> <li>• teacher</li> <li>• content expert</li> <li>• facilitator</li> <li>• advisor</li> <li>• role model</li> <li>• resource</li> </ul>
<p><b>6. Schedule</b></p> <p><i>(When and where will the course meet and what will I learn each time?)</i></p>	<p>The course schedule gives the topics, meeting times, dates, class location, facilitator, assignment due dates and testing dates and location. Also, it states what to do if the time/location changes.</p>

**7. Course Content**

*(What will I learn and need to study in this course?)*

The information listed in this section will vary depending upon the nature of the course, but it should contain information that cannot be obtained anywhere else. Here are some guidelines:

- Begin each unit/topic with the learning objectives for that course material
- Do give a course content outline or summary if it integrates material from multiple sources
- Keep a course content outline or summary at an appropriate amount for student self-study
- Do not duplicate information from required texts or simply photocopy PowerPoint slides
- Do cite additional reading references
- Add visuals that can be reproduced clearly for the syllabus and cite sources
- End each unit/topic with study questions

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**8. Assignments**

*(What am I expected to do outside of class?)*

Reading assignments are usually done outside of class, but it important to expand the assignments to inquiry-based and/or evidence-based activity. Such activities would be done individually or in small groups and involve:

- posing questions
- searching for evidence from multiple sources
- defending conclusions
- reviewing and critiquing research literature, etc.

## 9. Tips for Learning

*(What are the best ways to learn for this course?)*

In this section, the instructor can provide different suggestions for learning that has been successful for other students:

- Note taking during class
- Use of CourseInfo
- Completing assignments
- Study tips outside of class
- Small group interaction
- Time management
- Preparation for assessment

The course manager can also include study questions, sample tests, a learning style inventory to help student diagnose their study strategies, and resources that will help.

## 10. Assessment

*(How will I monitor my learning during the course, what is the final exam, and how is the final grade determined?)*

*LCME Standard ED-27. There must be ongoing assessment that assures students have acquired and can demonstrate on direct observation the core clinical skills, behaviors and attitudes that have been specified in the school's educational objectives.*

**Formative evaluation** empowers the student to monitor their learning of the course material with periodic quizzes, weekly study questions, small group problem sets or short essays.

*LCME Standard ED-30. The directors of all courses and clerkships must design and implement a system of formative and summative evaluation of student evaluation of student achievement to each course and clerkship.*

**Summative evaluation** describes how the students will be graded and measures their progress toward the competencies.

The syllabus should describe in this section the formative and summative evaluation for the course.

The value of formative assessment is in that it tells the students where and when to spend their time learning. They can self-diagnose their progress in the course.

	<p>Summative evaluation communicates information about the value of the different kinds of assessment, remediation, academic honesty and grading procedures.</p> <p>A competency-based curriculum uses criterion-referenced testing and grading. Students are assessed their work against pre-determined criteria and standards for excellence. This compares to norm-referenced testing where a student's achievement is compared to others in the class.</p> <p>If a student evaluation form is used, display it in this section so the students know how they will be assessed.</p>
<p><b>11. Student Evaluations</b>  <i>(What course improvements have been made as a result of previous student evaluations? What and when will student evaluations be expected?)</i></p>	<p>This section of the syllabus shows the course improvements already made for the students and identifies why they were made.</p> <p>By relating these improvements to student evaluations, the course manager documents responsiveness to student feedback.</p> <p>This would be a good place to include a copy of the course student evaluation.</p>
<p><b>12. Learning Resources</b>  <i>(What resources will help me learn in this course?)</i></p>	<p>The last component of the syllabus provides different kinds of sources to learn to supplement course materials. Resources can include:</p> <ul style="list-style-type: none"> <li>• Web pages</li> <li>• CDs/DVDs</li> <li>• Journal articles</li> <li>• Reference lists</li> <li>• Learning or media centers</li> <li>• Study questions or cases</li> <li>• Experts (librarians, faculty, alumni)</li> </ul>

## References

1. Fournier, D. (2004). A learning-centered approach to developing a syllabus in the predoctoral competency-based education program (Course Review and Improvement). Boston: Boston University School of Dental Medicine, Office of Educational Research and Evaluation.
2. Loscalzo, Basic Core Competencies of the Loscalzo Report (CERC).

## Appendix

## Quick Reference for Writing Learning Objectives

An easy way to remember how to write a learning objective is to combine A+B+C+D:

	Component	Task	Example
A	Audience	Describes the students in the course	First year students in Integrated Problems
B	Behavior	Provides an action* verb with an observable task	Analyze critically and report clinical cases
C	Condition	Defines the requirement(s) needed for the student to perform the task (tools, texts, clinics or wet labs)	In weekly meetings of small groups with Faculty
D	Degree	Lists the criteria for evaluating the student performance (sometimes implied as 100% correct)	With clear hypotheses, differential diagnoses and supporting evidence

Completed Learning objective:

*By the end of the Integrated Problems course (**Learning Objective Stem**), BUSM-1 students (**Audience**) will be able to analyze critically and report (**action verbs**) clinical cases (**content**) with clear hypotheses, differential diagnoses and supporting evidence (**degree**) on written examinations and as observed by faculty in weekly small group meetings (**condition**) .*

\*An action verb describes a performance. Verb such as "know, understand, grasp and appreciate" do not meet this requirement.

The Taxonomy of Educational Objectives by Benjamin Bloom identifies three major domains of Learning Objectives: the Cognitive, Psychomotor and Affective. Listed in the next box are examples of Cognitive Domain action verbs categorized by learner behavior. (Higher-level thinking involves analyzing, synthesizing and evaluating content.)

Knowledge: recall, identify, recognize, acquire, distinguish

Comprehension: translate, extrapolate, convert, interpret, abstract, transform

Application: apply, sequence, solve, prepare, explain, plan, generalize, plan,

Analysis: analyze, estimate, compare, observe, detect, classify, discriminate, identify, discover, explore, distinguish, catalog, investigate, order, determine

Synthesis: write, plan, integrate, formulate, propose, specify, organize, theorize, produce, design, build, systematize

Evaluation: evaluate, verify, assess, test, judge, rank, measure, select, check

### A General Comparison of an Instructional Syllabus with a Learner-Centered Syllabus

Syllabus Component	Instructional Syllabus	Learner-centered Syllabus
Point of View	Instructor's	Student's
Title Page (Course Name and Course Director/Manager/Instructor)	✓ Course name and date	Adds course number and course manager with contact facts
Table of Contents	Sometimes given from instructor's organization of content	Student can navigate through the references nonlinearly and know copyright information
Instructor/Course contact information	✓	✓ Plus website if applicable
Course Description	Summary or outline of content	<ul style="list-style-type: none"> <li>• Setting the tone for learning course material</li> <li>• Competency-based orientation</li> <li>• Instructor's attitude to learning and teaching</li> <li>• Course content study guide (includes some of the other components listed below)</li> </ul>
Course importance	No	Relevance of course to same semester courses
Links to medical competencies	No	✓
Lists Learning Objectives	✓ From instructor's perspective	✓ From student's perspective
Course format (Lecture, small group, lab)	✓	✓
Course Improvement	Sometimes	Current changes to course
Course Prerequisites	No	Describes prior knowledge and skills needed to succeed in course and where to review or learn them
Pre-testing prior knowledge and skills	No	Self-tests for students
Roles and responsibilities in learning	No	The role of faculty and student

Syllabus Component	Instructional Syllabus	Learner-centered Syllabus
		learning expectations
Class schedule	✓	✓ Adds how the students will be notified of changes
Assignments	✓	✓ Expected student inquiry-based or evidence-based performance outside of class
Tips for learning	Sometimes gives study tips	✓
Formative evaluation (quizzes, weekly study questions, cases, small group problem sets & short essays)	Sometimes	✓ Ongoing student feedback for self-monitor learning
Summative evaluation – how the final grade is measured	Norm-referenced (student's performance compared to others in class)	<ul style="list-style-type: none"> <li>• Criterion-referenced (student's performance compared to a standard)</li> <li>• Adds how the final grad measures progress toward competencies</li> <li>• Adds information about remediation</li> </ul>
Student feedback – includes student evaluation form	Sometimes	✓ Describes the changes made by the course manager and adds course changes as a result of previous student evaluations
Learning Resources	Sometimes	✓ Resources to help students learn

## Learner-Centered Syllabus Checklist

This checklist provides the basic syllabus components that you need for a Learner-Centered Syllabus. Please add or subtract to this list to customize a syllabus for your course. Place a checkmark (✓) next to the components as you complete each section.

- **Title Page**
- **Table of Contents**
- **Contact Information**
- **Course Description**
  - **Importance**
  - **Link to Medical Competencies**
  - **Learning Objectives**
  - **Format**
  - **Prerequisites**
- **Roles and Responsibilities for Learning**
- **Schedule**
- **Course Content**
- **Assignments**
- **Tips for Learning**
- **Assessment**
- **Student Evaluations**
- **Learning Resources**

## Fulfilling the Medical Competencies in ICM-1

Unit # & Topic	I. Effective Communication	II. Basic Clinical Skills	III. Using Science	IV. Lifelong Learning	V. Personal Growth	VI. Community Healthcare	VII. Ethical Judgment	VIII. Problem-solving	IX. Professionalism
1. Medical Interview & Vital Signs	Conduct a medical interview	Take vital signs	Record arterial pulse, respiration & blood pressure	Manage medical interview data	Develop confidence in conducting a medical interview	Join staff at clinical site	Decide validity of the patient's answers	Break-down HPI into its components	Develop physician-patient roles in conducting a medical interview and examining a patient
2. HPI, Genogram& Diagnostic Kit	Identify open-ended interview	Use of the ophthalmoscope and otoscope	Record 2 sets of vital signs	Record HPI	Examine own HPI	Document family medical history of clinic patient	Decide validity of the patient's answers	Illustrate a genogram	Empathize with patient's interests and meaning of illness
3. Cross-cultural Issues	Recognize the cultural issues in the medical interview	Use Diagnostic Kit	Use Diagnostic Kit	Manage cultural data	Identify own & other's cultural values	Observe clinical interaction using RESPECT model	Judge patient's commitment to cultural values	Use RESPECT model	Employ cultural awareness in practice of medicine
4. Assessing Substance Abuse and the Lung Exam	Question to identify substance abuse	Examine lungs	Screen for alcohol, tobacco & drug abuse	Record alcohol, tobacco & drug abuse data	Recognize own & other's substance abuse	Administer CAGE questions to clinic patients	Judge patient's commitment to substance abuse	Assess the evidence of alcohol, tobacco & drug abuse	Encourage patient to manage substance abuse
5. Asking About Sexual Behavior and the Cardiac Exam	Use appropriate questions to ask about a patient's sexual behavior	Examine Heart	Assess heart rate and rhythm	Manage info about patient's sexual behavior	Recognize ability to talk about sexual behavior	Observe doctor-patient interaction pertaining to sexual history	Determine validity of patient's sexual history	Obtain sexual history of clinic patient	Provide a comfortable environment for patient to talk about sexual behavior
6. Assessing Risks of Violence	Ask questions to screen for domestic violence	Examine Abdomen	Use techniques and the	Record info about a patient's	Develop the strengths to talk about	Observe doctor-patient interaction	Verify a patient's claim of	Obtain a HPI and screen for	Use intervention approaches and appropriate

Unit # & Topic	I. Effective Communication	II. Basic Clinical Skills	III. Using Science	IV. Lifelong Learning	V. Personal Growth	VI. Community Healthcare	VII. Ethical Judgment	VIII. Problem-solving	IX. Professionalism
and the Abdominal Exam			expected findings of the exam of the patient without abdominal pathology	domestic violence	domestic violence	pertaining to Domestic Violence	domestic violence	domestic violence	referrals