

Traditional Lecture Classes

Important Note

The description and assessment materials presented below pertain to traditional lecture classes. They have been designed by some of our best instructors in this format and therefore characterize the “best practices” for the format and give assessment criteria appropriate for an instructor teaching this format. Experienced instructors who have taught in multiple formats often adopt a mixture of styles, and so the criteria here may not apply at all times. In such cases, the *overall effectiveness of instruction* represents the bottom line when assessing good teaching.

Overview. In a typical traditional (lecture) class period, you should expect to see the instructor spend most of the hour presenting the day’s material to his/her class from the blackboard. However, this does not mean the instructor should spend the entire hour speaking *to* the students. Student involvement is vital during such a class period - the students should be asking questions when they get lost or confused and the instructor should involve the class when working out examples. Yet, in the traditional style, it is primarily the instructor’s responsibility to keep the class moving and to set the level of mathematical rigor. Thus the instructor needs to demonstrate appropriate command of the classroom as well as the material.

The traditional (lecture) format isn’t as well-defined in terms of being broken down into components or having amounts of time specified for various activities as in the other styles. The instructor of such a course has great freedom to decide how material should be presented, what topics should be emphasized and why, whether calculators should be used and to what extent, etc. The instructor may also choose to employ “enhancements” to the traditional lecture style – for example, including group work or a writing exercise during part of the class time. Due to these factors, the following evaluation syllabus for traditional style TA’s may need to be adapted by the observer as appropriate. It may be a good idea to bring the evaluation forms for the other styles (active learning, in particular) with you when you observe a traditional class.

Signs of a successful class session:

- The students aren’t passive (i.e., inactive). Rather, they are taking notes and asking questions during the lecture. They also participate freely during the lecture, not needing the instructor to force them by calling names or waiting quietly for an extended period of time after asking a question.
- The TA is enthusiastic with respect to both the material and the class. Teaching doesn’t appear to be unpleasant or merely a duty to the instructor and the content isn’t conveyed as being dull or trivial.
- The examples and applications are geared toward the student audience’s interests. For example, Math 134 (business calculus) optimization examples should relate to finance problems more often than to building boxes with and without tops.

Signs of an unsuccessful class session:

- Students are inattentive.
- Students are writing furiously to keep up with the lecture.
- Instructor spends most of the time facing the blackboard.
- There is no interaction with the class – no questions, etc.

- Instructor is disorganized and makes mistakes, which suggest not having worked through examples ahead of time.
- Instructor is disrespectful or shows impatience with students' lack of understanding.
- Class time is wasted on questions that might be better addressed individually in office hours.

Assessment Guide

(requires a class visitation and a brief interview)

General Conduct of the Class (visitation):

- Instructor begins and ends on time. Time is used well.
- Pace is neither too fast nor too slow. Instructor makes eye contact with the class to help gauge the pace.
- Students are attentive. Most students are taking notes.
- Student attendance is “high” – at least two-thirds of the roster is present.

Preparedness (visitation and interview):

- Instructor is well prepared. Most instructors will have written notes.
- Instructor moves through the lecture confidently and with few mistakes (everyone will make mistakes sometimes, but it should be clear the instructor has worked through the material in detail ahead of time).
- The instructor is at the right point in the syllabus.

Content (visitation):

- Instructor provides motivation for new topics, such as an application or relation to topics already studied. The instructor helps the students see the material in a larger context.
- Examples, illustrations, graphs are well chosen to illuminate the subject at hand.
- The level of mathematical rigor is appropriate for the course.

Interaction with Students (visitation):

- Instructor in some way assesses students’ understanding of the material. For example – asks questions of students, responds to students’ questions, asks students to work out an example.
- Instructor has good rapport with students – comfortable and respectful towards one another. This is usually easiest to see in the way students ask questions and the way the instructor responds to those questions.
- Instructor gives students frequent and useful feedback in some way, such as graded homework or graded quizzes. These may be returned to the students at the beginning of the class period. Otherwise, an instructor may ask for questions regarding the homework during this time.

Presentation of Material (visitation):

- Writing on the blackboard is clear and well organized.
- A student who simply copies what is on the board will have a reasonable set of notes.
- Instructor’s voice is clearly audible.
- Tests (if written by the instructor) are clearly written and include a mix of easy, medium and hard problems.

Interview Questions:

- How do you balance the evaluation and teaching roles when writing, giving and grading quizzes/exams?
- How do you select problems for classroom examples, homework exercises, and exams?

- Are your students making use of your office hours? How do you use this one-on-one time with them?
- What has been the most challenging thing for you about this particular class?
- (*Pre-Observation only*) What do you hope to accomplish during today's lecture?
- (*Post-Observation only*) What do you think went well and what could have been improved in today's lecture?

Assessment Form – Traditional Lecture Class

Instructor: _____ **Class:** _____

Evaluator: _____ **Date:** _____

General conduct of the class (visitation)::

Preparedness (visitation and interview):

Content (visitation):

Interaction with students (visitation)::

Presentation of material (visitation)::

Additional Information (interview):

Overall Assessment:

Should this instructor be recommended for a teaching award? _____

Typical Traditional (Lecture) Format Syllabus

(**Note:** This is Professor Braunfeld's typical syllabus. As he is the course captain of most of the traditional courses offered by the department (Math 124, 130, 135, 242, and 245), it seems appropriate that this should be used as our example.)

As course captain, I'd like to welcome you to Math XXX. I sincerely hope that you will find this course interesting, useful, and even enjoyable.

A few words of advice: Your instructor and I are prepared to help you in any way we can. But, in the last analysis, you will have to learn this material for yourself – no one can learn it *for* you. So, I urge you to work hard throughout the semester.

It's especially important to keep up. Don't let things go till just before an exam! Once you fall behind, you may find it very difficult to catch up. Also, please remember that mathematics is not a spectator sport. You can't learn math by just watching your instructor do it at the board – just as you can't learn how to swim by watching an expert swimmer. In both cases – math and swimming – you have to do it for yourself. That's why it's so important for you to do the homework assignments.

Information about the course: Your instructor should provide the following information:

- An information sheet that includes his/her office address, office phone, e-mail address, and office hours
- The grading policy for the course
- A calendar of hour exams

Getting help:

- Your instructor is there to help you. Don't hesitate to ask him/her questions, either in class or by going to his/her office.
- In addition, for most courses, the Mathematics Department offers free tutoring services. Times and places will be announced in about two weeks. Ask your instructor.
- If you have any questions or concerns, please discuss them *first* with your instructor. After that, if you feel your instructor can't help you, please contact me.

My very best wishes to you for a successful semester!

Attachments: (as described above in the "Information about the course" section)

- Instructor Information Sheet
- Grading Policy Sheet
- Hour Exam Schedule (plus remarks about missed exams – need a good excuse!)
- Department's Syllabus for the Course