

# Guidelines on discussion sections in non-coordinated courses in the Mathematics Department

## **The role of the discussion section**

In broad terms, the role of the discussion section is to facilitate mastery of the material introduced in lectures. The discussion section should be aligned with the course objectives and provide students with the chance to reflect on their learning and preparedness for exams. A discussion section is not meant to be used as an extra lecture or as an office hour.

## **Guidance on teaching assistants**

Every aspect of the course (including the discussion section) is ultimately the instructor's responsibility. The instructor should ensure that the discussion section is structured in a manner that aligns well with rest of the course and should work with the TA to improve aspects of the discussion section that are not successful.

Instructors should communicate to their TA what was covered during lectures, especially any concepts or notations that differ from those of the textbook, and assist the TA with developing a plan for running the weekly discussion section. Since TAs have varying degrees of prior exposure to the course material and different levels of teaching experience, they cannot generally be expected to generate examples or problems at the appropriate level of difficulty for the course without substantial input from the instructor.

Suggested best practices for working with teaching assistants include:

- Schedule weekly meetings with your TA
- Attend the first discussion section and provide feedback on how to effectively lead future class meetings
- Discuss with your TA specific modes of running the discussion (group work, whole class discussion, review, quizzes)
- Provide a concrete plan for 50 minutes worth of content to be covered during the discussion section
- Review effective teaching strategies with your TA
- Ensure the TA is informed on course policies and advise them to forward you important questions from the students.

- Clarify general expectations and deadlines. Provide a sense of oversight and teamwork.

**Important note:** A teaching assistant's assigned instructional duties should take no more than six hours per section per week. TAs are expected to grade the weekly homework or quiz (but not **both**).

## Discussion section format

While there are many different modes of conducting a successful discussion section, the format should generally be more interactive than the lectures, promoting depth and fluency of knowledge. This can be achieved, for example, by providing students with the opportunity to ask questions and work on problems with guidance from the TA.

A discussion section may contain a combination of the following:

- A graded assessment (e.g., quiz)
- Group work: students work in small groups on assigned problems
- Whole class discussion: the TA solves problems on the board with feedback from the students
- Review: the TA reviews portions of the material and gives students the opportunity to ask questions

## Examples of successful discussion sections

1. Students work in small groups on three practice questions assigned by the instructor. The TA visits each group and gives hints, if applicable. A representative of each group writes the group's joint solution to a problem on the board. The whole class discusses the solutions.
2. The discussion section begins with a 15-minute quiz. After the students complete the quiz, the TA reviews a difficult concept. The students are given the opportunity to ask questions. The whole class then discusses a problem related to the concept reviewed. The TA leads the class conversation and incorporates the students' suggestions into the solution she writes on the board.

## Common pitfalls

- A discussion section that fails to provide students with meaningful ways of engaging with the material might result in low attendance.
- Interactive features of the discussion section may be unsuccessful if they are not effectively applied and reinforced.
- Without the instructor's guidance, TAs have been known to lecture on material that has not yet been covered in class or on topics that they themselves find of interest, which tend to be at the graduate level and thus inappropriate.