

SYLLABUS — UTK – M309 – Training for Putnam Competition
Fall 2007

Time: To be determined later by mutual convenience. We will meet more or less weekly for approximate 90 minutes blocks in an informal way.

Textbook: none

Purpose of course: This course has arisen out of a formerly extracurricular activity. It is intended for students considering to participate in the Putnam competition (first Saturday in December) and runs in the fall semester. The course is NOT required for participation in the Putnam competition, but is intended to be useful for participants. It is also intended to have beneficial spinoff for mathematical skills of participants independent of the Putnam competition. With this spinoff in mind, the course is available also for students that do not take the competition.

The course is not connected with the Putnam competition in any formal way. The Putnam competition is administered by the Mathematical Association of America, and more info and links can be found at the website mentioned below.

It is intended to give a challenging mathematical problem solving experience in a leisurely setting. For this reason, among others, there is only an S/NC grading available.

The course is not designed to meet specific curricular requirements, and it will enjoy the freedoms that come with this restraint. It will however benefit mathematical skills across the undergraduate curriculum in the area mathematics, independent of a student's major, and it strives for high academic merit.

Audience: In line with the highly challenging nature of the Putnam competition, this course is targeted at students of strong mathematical talent. In a rough estimate, the course should be suitable for a portion among the top 10% in mathematical ability, with the further selection among them being determined by individual enthusiasm rather than smaller quantiles. For this reason, we refrain from determining prerequisites or hard admission conditions. The 'consent of instructor' requirement serves much more the purpose of establishing a connection than as an access hurdle.

Grade: For a grade 'S', the following is expected:

- (1) Attendance of at least 50% of the course. (This seems justified by the fact that we meet 90 min a week, but it is only one credit hour.)
- (2) Active contribution: Such contribution could consist of offering solution ideas, asking questions, giving a presentation, or suggesting problem variants.
- (3) Participation in the Putnam exam, or attendance of 4 more class meetings than required by part (1). (Each of the two adds up to about the same amount of time.)

If you are not attending a class, a brief note to this effect a day in advance will be appreciated, because of the individualized mode of instruction.

Homework: May be given in an informal way, as voluntary, and on a case-to-case basis.

Website: <http://www.math.utk.edu/Putnam/>

Note: Fall 2007 is the first time that this course runs as a catalog-listed class. The course can be taken repeatedly and may undergo some design changes in future years, but consistent with the catalog description and likely also with the philosophy outlined here. Participants' input concerning course design is welcome.