Math 495R – Fall 2025: Independent study

Instructor: Tuan Pham

Office hours: M, F: 2 – 3:30 PM at SCB 316

Course description: this 1-credit class is to help you prepare for the Putnam Competition.

Meeting time: Wednesday, 2 – 2:50 PM at SCB 211

Canvas: https://byuh.instructure.com/courses/1482903

Grading components:

- Attendance: 10 points each meeting (13 weeks)
- Preparation: 5 points each meeting (13 weeks)
- Taking the exam: 35 points for showing up to take the Putnam exam on Dec 6, 2025 (20 points in the morning and 15 points in the afternoon)
- Total: 230 points

Class topics:

- Sequence: 3 weeks
- Number theory: 3 weeks
- Polynomials: 2 weeks
- Games and invariance principle: 2 weeks
- Enumerative combinatorics: 3 weeks

Resource:

1) Archive of Putnam problems: https://kskedlaya.org/putnam-archive/
2) A lot of training problems: https://www.math.northwestern.edu/documents/undergraduate/math-clubs-competitions-prizes/putnam/training_problems.pdf
3) Putnam 'easy' problems: https://mlerma54.github.io/problem_solving/putnam/easy_putnam_problems.pdf
4) The book "Putnam and beyond" by Gelca and Andreescu (2007): https://byuh.on.worldcat.org/oclc/191447470
5) The book "Problem-solving strategies" by Arthur Engel (1998)