

(Preview of) Midterm Exam No. 01 (Fall 2026)

PHYS 520A: ELECTROMAGNETIC THEORY I

School of Physics and Applied Physics, Southern Illinois University–Carbondale

Date: 2026 Sep 22

1. **(20 points.)** Multipole moment.
2. **(20 points.)** On three positive charges at the corners of an equilateral triangle.
3. **(20 points.)** Use Gauss's law to find the electric field of a charge configuration.
4. **(20 points.)** Deduce the physics when electric field lines are given.
5. **(20 points.)** On boundary conditions across interfaces.