COURSE ANNOUNCEMENT
Fall Semester 2018

PHYS 598 SC1/SC2
Superconductivity, Ancient & Modern, Parts 1 & 2
Professor Tony Leggett

Time: Mon, Wed 1:00-2:20PM Credit: 2 hours for each part

Place: 276 LOOMIS Call Number: 38744 (Part 1)
        40489 (Part 2)

Superconductivity, Ancient & Modern, Part 1: SC1 is devoted to “classical”
superconductivity and its explanation in terms of the BCS theory; it focuses on the basic
nature of the superconducting state and its microscopic properties.

Superconductivity, Ancient & Modern, Part 2: SC2 covers the various classes of
superconductors which do not appear to fit well into the BCS scheme: heavy-fermion
systems, fullerences, organics, ruthenates, ferropnictides, and above all, the cuprate
(high-temperature), superconductors. In the case of the last, as well as describing the
experimental properties, the course will attempt to survey some of the principal themes
in current theoretical work, without committing to any specific model.

SC1 and SC2 are modules which can, if desired, be taken individually (though SC2
alone is recommended only for students with substantial previous exposure to the
theory of superconductivity). Register for SC1 or for SC2 or for both SC1 and SC2.

SC1 meets in the first half of the semester (August 27 – October 17).

SC2 meets in the second half of the semester (October 22 – December 12).