

This option provides students with the opportunity to concentrate on one of three focus areas.

1. WIRELESS CIRCUITS focuses on theory, design and characterization of circuits operating in the r.f., microwave, millimeter-and sub-millimeter-wave spectrum. These circuits are primarily analog circuits. Areas covered include: modeling, circuit and electromagnetic CAD techniques; monolithic and hybrid approaches; modern precision and/or automated measurement techniques.

2. WIRELESS SYSTEMS focuses on operating principles, design and evaluation of r.f., microwave, millimeter-and sub-millimeter-wave sub-systems and their overall impact on system performance. Sub-systems considered are drawn from such applications as: satellite, cellular and personal communication; target detection, navigation, earth and planetary observation radars; other specialized applications, including those in global positioning systems, radiometric systems, and vehicular systems for navigation, identification and safety. Note: students with an overall interest in Communications and Signal Processing are urged to also familiarize themselves with that option and the General option.

3. The ANTENNA and ELECTROMAGNETICS area focuses on advanced electromagnetic theory, computational electromagnetics, and mathematical description of wave propagation. Topics emphasized in this area may change from year to year, but they include: antennas (including miniature and mobile), geometric theory of diffraction, numerical modeling of fields in