LECTURES: MW 10:00-11:50 am, online.

INSTRUCTOR: Gabor C. Temes, Professor, temes@eecs.oregonstate.edu

OFFICE HOUR: MW 14:00-15:00 pm

PREREQUISITE: Graduate standing

TEACHING ASSISTANT: Manjunath Kareppagoudr

TA Office Hours: Wednesday 3:4.30 pm via zoom

Web Site: http://classes.engr.oregonstate.edu/eecs/Fall2020/ece580/

TEXT: Lecture notes will be posted on the Web. Parts of the following books will be used:


(Note: It is not necessary to acquire these books. Most are out of print. Lecture notes will be posted on the class website.)

MATERIAL TO BE COVERED (if time permits):


- Networks components: R, L, C elements; ideal/perfect/real transformers; op-amps; gyrators; independent/dependent sources. Definitions useful in all discussions involving circuits.

- Network analysis: the incidence matrix; branch relations; nodal analysis; two-port parameters; multiport networks; multiport parameters; scattering relations and parameters; transfer functions; sensitivity analysis. The basis of computer-aided and paper-and-pencil circuit analysis of passive, active R-C, Gm-C and switched-capacitor filters.

- Network synthesis: approximation theory for continuous-time and sampled-data filters; the design of passive, active R-C, Gm-C and switched-capacitor filters. The basics of active, passive and sampled-data analog filters.
MIDTERM EXAMINATION: Wednesday, Oct. 21, 10 - 11:50 am.

FINAL EXAMINATION: Monday, Dec. 7, 12 – 2 pm.