

EET 3706 - Electronics 2

Fall 2026 Syllabus, Section 01, CRN 43589,

Credit hours: 3

Instructor

Daniel Opalewski

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Public Instructor Information

Instructor Title: Dr. or Professor Daniel Opalewski

Instructor Professional Qualifications: Ph. D., General Engineering, Kennedy Western University, 2005

Post masters, Systems Engineering Post Master Oakland University, 1989-1990

Masters, Masters of Science in Electrical Engineering, Wayne State University, 1988

Bachelors, Bachelor of Science in Electrical Engineering, Lawrence Tech University, 1984

Associates, Electrical Engineering Technology, Macomb County Community College, 1976

Licensed Professional Engineer for state of Michigan, Pennsylvania and Maryland

Licensed Private Pilot, since 1978

Licensed Radio engineer, General Radio Telephone Operator License, Federal Communication Commission., 1986

Instructor Office Location: Moser 4200 Instructor

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Course Description

3706. Electronics 2. Field effect transistor (FET) bias circuits and amplifiers, thyristor circuits, frequency effects (Bode plots), differential amplifiers, linear and non-linear op amp circuits, active filters, oscillators and regulated power supplies. Prereq.: "C" or better in EET 1502 and EET 1502L and EET 2605 and EET 2605L and MATH 1570. Concurrent with EET 3706L. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Electronic Devices conventional current	Floyd, 10th ed	13:978-0-13-441-444-7

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Proposed Textbook Chapters

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Review Diodes, BJT Bias and amplifiers	review examples of diode and BJT bias models for AC, DC and loadlines and amps	
8/31	JFET, MOSFET amplifiers, chpT 8, 9	JFET and MOSFET parameters and amplifiers	
9/7	Amplifier Frequency Response, Chpt 10	low and high frequency amplifier response, intro to BODE plots	
9/14	Thyristors, Chpt 11	SCR, DIAC, TRIAC, UJT application	



9/21	OP Amp, Chpt 12	OP amps practical model, CMRR, negative feedback circuits
9/28	Basic OP Circuits, Chpt 13 Quiz 1	Finish OP with frequency response, quiz review
10/5	Basic OP Circuits, Chpt 13	comparators, integrators and differentiators
10/12	Special Purpose IC circuits, Chpt 14	instrumentation amplifiers
10/19	Active Filters, Chpt 15	active low pass filters, band pass filters, high pass filters
10/26	Oscillators, Chpt 16	positive feedback, conditions for oscillation, colpitts oscillator
11/2	Oscillators, Chpt 16 Quiz 2	armstrong oscillator, crystal-controlled oscillator, VCO's 555 timer, quiz review
11/9	Voltage Regulation, Chpt 17	voltage regulation, linear, shunt, switching regulators voltage regulator chips
11/16	Communication Devices, Chpt 18	superheterodyne AM receiver, FM, receiver
11/23	Communication Devices, Chpt 18	sum and diff frequencies, AM modulation, FM modulation, PLL, Fiber
11/30	Final Exam Review	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.