

Table 1 – Use this table to describe the course match for which materials are being submitted for the first time or revised.

Proposed effective year and term of match (Final effective date will depend on actual approval of match by faculty panel. Effective Year and Term is the first term in which students taking the course will receive matching credit.)

Semester institutions complete this row:

2000 Academic Year Summer Autumn Spring

Quarter institutions complete this row:

2000 Academic Year Summer Autumn Winter Spring

Ohio Articulation Number (OAN)

(Use a separate form for each OAN.):

OET001

Number of courses in the match:

1
(up to 10)

Current status of match:

First time submission

- | | | |
|--|--------------------------------------|--|
| <input type="checkbox"/> Approved | <input type="checkbox"/> Submitted | <input type="checkbox"/> Disapproved |
| <input type="checkbox"/> Error | <input type="checkbox"/> Resubmitted | <input type="checkbox"/> Pending |
| <input type="checkbox"/> Error with enrollment | | <input type="checkbox"/> Not submitted |

Course or Courses being matched to or currently matched to the OAN listed above.

(Course Numbers must be exactly what will appear on a student's transcript.):

Course Number

- | | |
|-----|--|
| 1. | |
| 2. | |
| 3. | |
| 4. | |
| 5. | |
| 6. | |
| 7. | |
| 8. | |
| 9. | |
| 10. | |

Table 2 - Use this table to submit course materials for the first time or to revise previously submitted course materials. You must submit each course in a separate form, repeating the match definition information in Table 1 above for each form submitted.

Course Number. (Course Numbers must be exactly what will appear on a student's transcript.):		ENT 192	Course Title:		Circuit Analysis I
Hours (be sure that the hours for this course matches the hours in the OAN.) 3					
<input checked="" type="checkbox"/> Semester Hours			<input type="checkbox"/> Quarter Hours		
Total Credit Hours	3	Lecture Hours	3	Laboratory Hours (if applicable)	3
Course Placement in Major:			<input type="checkbox"/> Major Requirement <input type="checkbox"/> Major Elective <input type="checkbox"/> Major Not Offered <input type="checkbox"/> Other		
Pre-Requisite Course work (if applicable) (Be sure this is consistent with the OAN definition): See catalog/course description					
Catalog/Course Description: 192 Circuit Analysis I (3) Detailed study of analog a-c and d-c electric circuits and related bilateral devices. Conventional circuit analysis techniques utilized. Prerequisite: two years of high school algebra including trigonometry. Corequisite: MTH 125. 2 Lec. 1 Lab. (Electrical technology)					
Texts/Outside Readings/Ancillary Materials (Be sure that the text meets performance expectations): Title: (1) Introductory Circuit Analysis (2) Experiments in Circuit Analysis Author: (1) Robert L. Boylestad (2) Boylestad and Kousourou Publish Date: (1) 11th edition Publisher: Other texts:					
Course Objectives and/or Plan of Work: (Provide a clear indication of how the course objectives align with the matched OAN's learning outcomes. This will facilitate the faculty panel course review process.) COURSE OUTCOMES: <ul style="list-style-type: none"> • Demonstrate knowledge of basic electrical circuits • Knowledge of electrical engineering safety • The ability to effectively use electrical/electronic measurement tools • The ability to apply troubleshooting techniques in the identification and correction of faults in electric circuits • Ability to conduct experiments, obtain data and make improvements in designs • Proficiency in the concepts of electrical and computer engineering technology • A commitment to quality, timeliness, and continuous improvement 					
Description of Assessment and/or Evaluation of Student Learning (The assessment plan					

needs to be appropriate for the expected rigor of the course) :

Master Syllabi and Working Syllabi (if both are used):

MIAMI UNIVERSITY
SCHOOL OF ENGINEERING AND APPLIED SCIENCE
DEPARTMENT OF ENGINEERING TECHNOLOGY

ENT - 192	Circuit Analysis-1	3	
Course Number	Title		Credit
hours			

DESCRIPTION:

Detailed study of analog and dc electric circuits and related bilateral devices. Conventional and computer circuit analysis will be utilized.

PREREQUISITES: Two years of high school algebra including trigonometry.

TEXT MATERIAL:

Robert L. Boylestad, Introductory Circuit Analysis, 11th edition
Boylestad and Kousourou, Experiments in Circuit Analysis

COURSE OBJECTIVE:

The student will develop an understanding of the principals and concepts of electricity, current flow; energy, power, work, transient effects, ac and dc circuit analysis, and analysis by computer simulation.

COURSE OUTCOMES:

- Demonstrate knowledge of basic electrical circuits
- Knowledge of electrical engineering safety
- The ability to effectively use electrical/electronic measurement tools
- The ability to apply troubleshooting techniques in the identification and correction of faults in electric circuits
- Ability to conduct experiments, obtain data and make improvements in designs
- Proficiency in the concepts of electrical and computer engineering technology
- A commitment to quality, timeliness, and continuous improvement

OHIO TRANSFER MODULE OET 001 TOPICS INCLUDED:

1. Electrical components and quantities
2. Definitions of voltage, current, electrical resistance and power
3. Ohm's law, electrical energy and power, Kirchhoff's Laws
4. Series circuit analysis
5. Parallel circuit analysis
6. Series-parallel circuit analysis
7. Circuit theorems (superposition, Thevenin's and Norton's theorems)
8. Mesh and/or nodal analysis techniques
9. Properties of capacitors and their behavior under DC conditions
10. Properties of inductors and their behavior under DC conditions

MEETING PLACE AND TIME:

Two sessions per week for 1:50 Minutes.

ENT 192 FALL
Seifried 10/29/07

Page 1

Revised by Dr.

COURSE SCHEDULE AND TOPICS:

Week	Date	Topic	Homework
1		Chapter 1 Introduction	1.6, 1.7
Chapter 2		Current and Voltage	13,15,16,25
			2,3,5, 9,11,16,22
1		Lab 1: TINA	
2		Lab 2: Handout: Measuring voltage and current	
2		Chapter 3 Resistance	1,3,6,10,13,40,45,52
3		Switch day - No class	
3		Lab-3: dc-2: Resistors and Color Code	
		(Probs. 1 & 2 only)	
4		Chapter 4 Ohm's Law Power and Energy	
Quiz 11,2,4,6,7,11,22,24,32,39,			49,51,52,41,42
4		Lab 4: dc-3: Ohms Law (Excl. Part 4 & Probs.)	
5		Chapter 5 Series dc Circuits	1,5,7,9,10,18,19,21,22,
			23,24,26,33
5		Lab 5: dc-4: Series Resistance	
6		Chapter 6 Parallel dc Circuits, Troubleshooting	
Quiz 2			1,2,3,4,8,9,10,13,15,16,
			25,27,31,35,43,45
6		Lab 6: dc-6: Parallel Resistance Using TINA	
7		Chapter 7 Series-Parallel Circuits	1,2,3,9,10,13,15,25,26,27,
			31,35
7		Lab 7: dc-9: Series-parallel dc Circuits	
8		Chapter 10.1-10.6 Capacitors	2,4,7,10,15
8		Mid-term Exam	
9		Chapter 10.7-10.13 Capacitive Transients	21,23,24,36,37,51,53,54
9		Lab 8: dc-14: Capacitors (See handout)	
10		Chapter 12 Magnetic Circuits	
Quiz 3			3,5,7,9,14
10		Lab 9: Handout: Magnetic Circuits	
11		Chapter 11 Inductors & Transients	7,8,9,10,12,13,35,41
11		Lab 10: dc-15: RL and RLC Circuits (Excl. Prob. 2)	
12		Chapter 13 Sinusoidal ac	
Quiz 4			1,2,3,4,8,10,11,12,15,17,
			26,35,43,47
12		Lab 11: ac-2: The Oscilloscope	
13		Chapter 14.1 - 14.5 Basic Elements Frequency Resp.	1,3,5,8,14,17
13		Lab 12: Build and test a dc power supply	
14		Chapter 14.6 - 14.12 Complex math, Phasors	
Quiz 5			31,33,39,40,44,45,48

14	Thanksgiving - No class	
15	Chapter 15.1 - 15.6 Series ac Circuits	1,3,4,5,10,15,25,26,28
15	Lab 13 ac-3: RLC Components	
16	Review for final exam. Evaluation	
16	Lab Exam	
17	Final Exam	

ENT 192 FALL
Seifried 10/29/07

Page 2

Revised by Dr.

Additional Documentation:

OBR Use

Approved-Effective Date	
Pending (i.e. Additional Information Requested)	
Disapproved	
Today's Date	