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Received(time)	3:09 PM
Date	10/25/2006

**Ohio Articulation Number (OAN)
Course Submission Form
2005-2006**



College/University Lakeland Community College

Course(s) Submitted(Title & Course #) ENGS 1000 Introduction to Engineering for
Ohio Articulation Number OES001

Date October 24, 2006 Course 1 of a 1 Course OAN mapping.

Name and title of individual submitting on behalf of the college/university

Name Marilyn S. Jones Title Associate Provost

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Credit Hours 2 qtr _____ sem X

Lecture Hours 1

Laboratory Hours 2 (if applicable)

Pre-Requisites(s) Course work (if applicable)

Placement Score (if applicable)

(Name of test)

(Domain) (Score)

Catalog/Course Description (Includes Course Title and Course #)

ENGS 1000 Introduction to Engineering: This course introduces students to the various career options that are available in the engineering and engineering technology fields. It also instructs students in various methods that can be used for solving complex engineering problems, including the interpretation and presentation of data. It introduces students to many basic pieces of equipment

that they will use in future laboratory experiments. Finally, it discusses many of the ethical dilemmas that engineers face during their careers in the workplace.

Texts/Outside Readings/Ancillary Materials

A User's Guide to Engineering by James Jensen, Prentice Hall 2006

Course Objectives and/or Plan of Work

GENERAL COURSE GOALS:

1. Instruct students in the study skills that are needed to be a successful engineering student. This includes successful techniques for overcoming test anxiety.
 2. Provide numerous problem solving methodologies to think critically and be able to solve complex open-ended problems that are encountered in engineering.
 3. Explain the various disciplines and functions of engineering and engineering technology professionals in the workforce.
 4. Provide students with the opportunity to use pieces of equipment that will be utilized in their future courses in a team environment.
 5. Examine ethical issues that are encountered in technical fields.
 6. Instruct students in the use of a spreadsheet program
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COURSE OBJECTIVES:

Upon completion of the course, the student should be able to:

1. State the study skills that are necessary to be a successful engineering students.
2. Describe and apply the methodologies that are used to solve complex open-ended engineering problems.
3. Describe the various disciplines and functions of engineering and engineering technology professionals in the workforce.
4. Use the basic operations of a standard spreadsheet program, including how to present and interpret data in graphical form.
5. Demonstrate the use of routine equipment that will be used in engineering labs.
6. Explain the advantages and disadvantages of working in teams.
7. Analyze engineering situations to determine if they are ethical.

Description of Assessment and/or Evaluation of Student Learning

SUGGESTED GRADING PROCEDURES:
Tests and homework assignments
Laboratory reports
Computer projects

SUGGESTED COURSE EVALUATION PROCEDURE:
A: 90% or greater
B: 80-90%
C: 70-80%
D: 60-70%
F: below 60%

Master Syllabi and Working Syllabi (if both are used)

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* THIS IS A VERSION OF THE COURSE OUTLINE THAT HAS BEEN
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* APPROVED, AND WILL BE EFFECTIVE AS OF FALL 06
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LAKELAND COMMUNITY COLLEGE - COURSE OUTLINE FORM

ORIGINATION DATE: 03/21/06 APPROVAL DATE:
03/21/06
LAST MODIFICATION DATE: 03/30/06 EFFECTIVE TERM/YEAR: FALL
2006

10/12/06
COURSE NUMBER: ENGS1000
COURSE TITLE: Introduction to Engineering

PRINTED:

	LECTURE	LAB	CLINICAL	TOTAL	OBR MIN
OBR MAX					
CREDITS:	1.00	1.00	0.00	2.00	2.00

2.00

CONTACT HOURS: 1.00 2.00 0.00 3.00

PREREQUISITES:

PROGRAMS & CERTIFICATES FOR WHICH THIS COURSE IS REQUIRED:
NONE

PROGRAMS & CERTIFICATES FOR WHICH THIS COURSE IS AN ELECTIVE:
NONE

COURSE ACCEPTED AS TRANSFER CREDIT BY:

RECOMMENDED CLASS SIZE: 20 RATIONALE: LAB CONSTRAINTS

FREQUENCY OF OFFERING: 2 X YEAR
TERMS NORMALLY OFFERED: FALL SPRING

LAB FEE: NONE

RATIONALE FOR COURSE:

The course is designed to meet the requirements of the Ohio Board of Regents Transfer Applicability Guide for Introduction to Engineering, OES-001.

Also, many engineering students lack the proper methodology for critical thinking and problem solving and this course is designed to address this problem.

COURSE DESCRIPTION:

This course introduces students to the various career options that are available in the engineering and engineering technology fields. It also instructs students in various methods that can be used for solving complex engineering problems, including the interpretation and presentation of data. It introduces students to many basic pieces of equipment that they will use in future laboratory experiments. Finally, it discusses many of the ethical dilemmas that engineers face during their careers in the workplace.

GENERAL COURSE GOALS:

1. Instruct students in the study skills that are needed to be a successful engineering student. This includes successful techniques for overcoming test anxiety.
2. Provide numerous problem solving methodologies to think critically and be able to solve complex open-ended problems that are

encountered in engineering.

3. Explain the various disciplines and functions of engineering and engineering technology professionals in the workforce.

4. Provide students with the opportunity to use pieces of equipment that will be utilized in their future courses in a team environment.

5. Examine ethical issues that are encountered in technical fields.

6. Instruct students in the use of a spreadsheet program

COURSE OBJECTIVES:

Upon completion of the course, the student should be able to:

1. State the study skills that are necessary to be a successful engineering students.
 2. Describe and apply the methodologies that are used to solve complex open-ended engineering problems.
 3. Describe the various disciplines and functions of engineering and engineering technology professionals in the workforce.
 4. Use the basic operations of a standard spreadsheet program, including how to present and interpret data in graphical form.
 5. Demonstrate the use of routine equipment that will be used in engineering labs.
 6. Explain the advantages and disadvantages of working in teams.
 7. Analyze engineering situations to determine if they are ethical.
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COURSE OUTLINE:

- I. Study Skill Habit
 - II. Problem Solving Methods
 - III. Overview of Engineering and Engineering Technology Disciplines
 - IV. Working in a Team Environment
 - V. Use of Common Laboratory Equipment
 - VI. Ethical Issues in Engineering
 - VII. Use of Spreadsheets to Graph and Interpret Data
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	4. Math and Science	1 2
6		
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	5. Past and Present Cultures	
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	6. Technology	1 2
6		

	*** CRITICAL THINKING ***	

	7. Identify Personal Assumptions	
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	8. Identify Ethical Dimensions	1 2
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	9. Examine Issues by Suspending/Challenging Assumpt	
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	10. Evaluate Issues from Various Perspectives	
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	11. Collect, Analyze, Interpret Information	1 2
6		
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	12. Support Hypotheses	
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	13. Synthesize Information	1 2
6		
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	14. Draw Conclusions	1 2
6		

	*** COMMUNICATION SKILLS ***	

	15. Speak Clearly and Effectively	
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	16. Read with Comprehension				
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	17. Write Clearly & Effectively in Standard English				
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	18. Work Effectively in Groups		1		
	19. Listen Actively and with Understanding				
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	20. Practice Effective Interpersonal Skills				
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	21. Interpret/Use Graphic Communication		1		2
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	22. Use Technology-Based Communication		1		2

| Methods of Assessment codes:
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1. Test/Examination
2. Homework/Written
Demonstration of
Assignment
3. Research Paper
(specify) |

□&l6D

*** THIS COURSE OUTLINE WILL BE EFFECTIVE FALL 06

Additional Documentation

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OBR Use

Action

Approved	
Additional Information Requested	
Rejected	
Date	

