

**BREVARD COMMUNITY COLLEGE
AEROSPACE TECHNOLOGY PROGRAM**

COURSE: ETIC 1832 MATERIALS & PROCESSES II

PRE-REQS: ETIC 1830 MATERIALS & PROCESSES I

INSTRUCTOR:

CONTACT DATA:

TEXTS: Industrial Materials Helse/Liu

COURSE DESCRIPTION:

This course provides information of nature and behavior of non-metallic materials and processes used in aerospace applications with an emphasis on composites. The study of reinforcing fibers, laminating resins, adhesives, manufacturing/repair and assembly processes, and inspection techniques are covered.

COMPETENCIES DEVELOPED IN THIS COURSE:

- Identify and characterize composite materials
- Current Status/State of Composite Industry (History and Terms)
- Identify uses and hazards involved in working with composite materials and commodities
- Demonstrate knowledge of composite manufacturing
- Identify Resin/Matrix Systems
- Identify tooling and Testing required for composite manufacture
- Identify Methods of Inspection of Composite Materials
- Identify Fasteners used with composites
- Identify symptoms/causes of delamination
- Identify symptoms/causes of faulty bonds
- Identify Repair Techniques for composite materials
- Identify appropriate emergency procedures around composite materials
- Identify adhesives and other non-metallic fasteners used in the aerospace industry

GRADING PROCEDURE:

Classroom Participation (Attendance, Preparation, Safety, Professionalism)	30%
Examinations	30%
Labs & Assignments	20%
Final Exam	20%

SCALE:

90 to 100%	A
80 to 89%	B
70 to 79%	C
60 to 69%	D
Below 60%	F

**GRADING SCALE, ATTENDANCE POLICY, AND WITHDRAWAL POLICY
WILL BE IN ACCORDANCE WITH THE STUDENT HANDBOOK AND
COLLEGE CATALOG.**