

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: NON-DESTRUCTIVE TESTING

CODE NO: ASR110

SEMESTER: II

PROGRAM: AIRCRAFT STRUCTURAL REPAIR TECHNICIAN

AUTHOR: STEVE LACHOWSKY

DATE: FEBRUARY 1994

PREVIOUS OUTLINE DATED: SPRING 1993

APPROVED: _____

Steve Lachowsky
Dean, School of Engineering Tech.

Date

94-02-10

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TOTAL CREDIT HOURS: 30 HOURS (2 CREDITS)

PREREQUISITE(S):

I. PHILOSOPHY/GOALS:

Extensive research will be accomplished to identify the types of N.D.T. method in use in the aircraft industry. The advantages, disadvantages and procedures used to perform N.D.T. will be discussed. Emphasis on Dye Penetrate, Magnuflux, Visual and Radiographic procedures will be addressed. Various test equipment will be discussed associated with each type of N.D.T. methods. Presentations will be administered in class and laboratories.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

Identify various methods of N.D.T. methods.

Describe the advantages and disadvantages of selecting the proper N.D.T. method.

Discuss equipment and personal safety precautions.

III. TOPICS TO BE COVERED:

N.D.T. Types
Equipment

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IV. LEARNING ACTIVITIES

1.0 N.D.T. Types

Upon successful completion of this unit the student will be able to:

- 1.1 Identify the various types of N.D.T. methods used in aircraft inspection.
- 1.2 Describe the procedures used to perform basic N.D.T. methods.
- 1.3 Select the proper type of N.D.T. method to be used.
- 1.4 Discuss the advantages and disadvantages of one method vs. other methods.

2.0 Equipment

Upon successful completion of this unit the student will be able to:

- 2.1 Identify the various equipment associated with N.D.T. methods.
- 2.2 Discuss the safety precautions associated with N.D.T. equipment.

REQUIRED RESOURCES

Textbook: A/C 65-9A
Chapter X, pg. 463-486

Textbook: Non-destructive Testing in
Aircraft EA-AC-43-3
pg. 1 to 31

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V. EVALUATION METHODS: (INCLUDES ASSIGNMENTS, ATTENDANCE REQUIREMENTS ETC.)

One written test - 100%

The grading system will be as follows:

A = 90%-100%

B = 80%-89%

C = 70%-79%

I = Incomplete

VI. REQUIRED STUDENT RESOURCES

A & P General Handbook A/C 65-9A

Non-Destructive Testing in Aircraft - EA-AC-43-3

VII. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY:

Book Section (title, publisher, edition, date, library call number if applicable - see attached example)

Periodical Section (Magazines, Articles)

D.O.T. Service bulletins and Airworthiness Directives

Audiovisual Section (Films, Filmstrips, Transparencies)

Transparencies as per General Handbook A/C 65-9A

VIII. SPECIAL NOTES

Students with special needs (eg. physical limitation, visual impairments, hearing impairments, learning disabilities) are encouraged to discuss required accommodations confidentially with the instructor.

Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of the students.