



A POLYTECHNIC INSTITUTION

School of Manufacturing, Electronics & Industrial Processes

Program: Technology Teacher Education

Option: Diploma

TTED 3004

Joining Processes Foundations

Start Date: Oct. 9/06

End Date: Dec. 15/06

Total Hours: 40 Total Weeks: 10

Term/Level: 1 Course Credits: 2.5

Hours/Week: 4 Lecture: 1 Lab:

Shop: 3 Seminar: Other:

Prerequisites**Course No. Course Name**

TTED 3009	Basic Safety Foundations
TTED 3002	Precision Meas. Foundations
TTED 3020	Hand Tool Basics Metal/Mech
TTED 3030	Hand Tool Basics Wood/Plastics
TTED 3040	Materials Science Foundations

TTED 3004 is a Prerequisite for:**Course No. Course Name**

TTED 400	Design, Drawing & CAD 1 for TTED
TTED 4025	Product Manufacturing for TTED
TTED 4040	Materials Science for TTED
TTED 4001	Design, Drawing & CAD 2 for TTED

Course Description

This course introduces the basic principals and methods of joining wood, metals and plastics. Methods covered will include solvent cementing of plastics, gluing and clamping of woods, soldering, brazing and fusion welding of steel.

Failed Course Description

The goal of the course is to provide an introduction to the theory and practice necessary to perform basic joining processes for woods, plastics and metals.

Evaluation

Practical Labs & Reports	50%	Comments: All assignments and work must be done individually, unless otherwise noted.
Final Exam	50%	
TOTAL	100%	

All assignments and work must be submitted on time, unless previous arrangements have been made with the instructor.

A mark of 50% or greater must be obtained in order to pass this course.

Both the lab portion of the course and the final exam must be passed in order to receive a passing grade in this course.

Course Learning Outcomes/Competencies

Upon successful completion, the student will be able to:


1. describe and demonstrate the joining of plastics through the process of solvent cementing.
2. describe and demonstrate the joining of woods through the process of gluing and clamping.
3. describe and demonstrate the joining of metals through the processes of soldering, spot welding, brazing, and fusion welding (oxy-acetylene, shielded metal arc, MIG & TIG).

Verification

I verify that the content of this course outline is current.



Authoring Instructor



Date June 23/06

I verify that this course outline has been reviewed.




Program Head/Chief Instructor



Date June 23/06

I verify that this course outline complies with BCIT policy.



Dean/Associate Dean



Date 2006/06/26

Note: Should changes be required to the content of this course outline, students will be given reasonable notice.

Instructor(s)

Phil Esworthy

Office Location: SW9-205E

Office Phone: 604-432-8332

Office Hrs.: By Appointment

E-mail Address: Phil_Esworthy@bcit.ca

Learning Resources

Required:

Casperson, D. D., Basic Metalwork Procedures
Hoadley, R. Bruce, Understanding Wood
Welding Level C P3-1 to P3-10 booklet (MN1809)
Welding Level C P4-1 to P4-11 booklet (MN1810)
Welding Level C P6-1 to P6-10 booklet (MN 1812)
Common Core Line J (MN1727)

Information for Students

Assignments: All assignments and work must be submitted on time unless previous arrangements have been made with the instructor. Assignments, lab reports or projects must be done on an individual basis unless otherwise specified by the instructor.

Makeup Tests, Exams or Quizzes: There will be no makeup tests, exams or quizzes. If you miss a test, exam or quiz, you will receive zero marks. Exceptions may be made for **documented** medical reasons or extenuating circumstances. In such a case, it is the responsibility of the student to inform the instructor **immediately**.

Ethics: BCIT assumes that all students attending the Institute will follow a high standard of ethics. Incidents of cheating or plagiarism may, therefore, result in a grade of zero for the assignment, quiz, test, exam, or project for all parties involved and/or expulsion from the course.

Attendance: The attendance policy as outlined in the current BCIT Calendar will be enforced. Attendance will be taken at the beginning of each session. Students not present at that time will be recorded as absent.

Illness: A doctor's note is required for any illness causing you to miss assignments, quizzes, tests, projects, or exam. At the discretion of the instructor, you may complete the work missed or have the work prorated.

Attempts: Students must successfully complete a course within a maximum of three attempts at the course. Students with two attempts in a single course will be allowed to repeat the course only upon special written permission from the Associate Dean. Students who have not successfully completed a course within three attempts will not be eligible to graduate from the appropriate program.

Course Outline Changes: The material or schedule specified in this course outline may be changed by the instructor. If changes are required, they will be announced in class.

Advancement: Students who fail three or more courses in a term cannot advance to the next term and may be asked to discontinue from the program.

TTED Program Policy Information

All assigned work must be submitted on or before the specified date. Due dates will be provided by instructors in writing and late work will not be accepted without prior permission from the instructor. Exceptions to this policy will be made for students having documented personal reasons (e.g., medical).

Assignments which fail to meet the standards of the program will be returned marked **UNSATISFACTORY**, with instructor comments and will be recorded as a zero. Standards relate to:

1. The format used (see below).
2. The quality of the English language used.
3. The overall quality of the submission's content.

Unless otherwise indicated, all assignments are to be submitted in a standard format:

1. Begin with a title page showing the following information:
 - Course Name & Number:
 - Assignment Identification:
 - Submitted by:
 - Submitted to:
 - Date:
2. Use standard 8 1/2" x 11" white unlined paper, unless another size is specified for the assignment.
3. Text word-processed and printed in an easily read font.
4. Diagrams hand-drawn or computer-generated to the standard taught in the program (specific instructions may be associated with certain assignments).
5. Your name and date in a footer on every page.

Plagiarism will result in an automatic zero for an assignment for all students involved in the deed. To avoid a charge of plagiarism in research work, always include references which properly credit the original author or designer. This referencing is particularly important when working with partners or teams. Some assignments will be assigned as individual work and even though you may consult with others, the final submission must be your own work and not copied or adapted from the work of others.

Schedule

Week	Topics/Material Covered	Reference/ Reading	Assignment	Due Date
1	Polymer solvent cementing Wood gluing	Handouts	Lab & report	C set: Oct. 20/05 D set: Oct. 24/05
2	Metal joining: Soldering	Handouts Casperson: pages 50 - 52	Soldering samples	C set: Oct. 20 D set: Oct 25
3	Metal joining: Brazing	Trades Common Core: Line J, Oxyacetylene Cut & Weld, P3-1 & P3-2	Brazing samples Report	C set: Oct. 27 D set: Nov. 1 Nov. 7
4	Metal joining: Gas welding	P3-3, P3-4 & P3-5	Gas welded samples	
5	Metal joining: Gas welding	P3-3, P3-4 & P3-5	Gas welded samples	C set: Nov. 10 D set: Nov. 15
6	Metal joining: Arc welding	P4-1, P4-2, P4-3, P4-4, P4-6, P4-7 & P4-9	Arc welded samples	
7	Metal joining: Arc welding	P4-1, P4-2, P4-3, P4-4, P4-6, P4-7 & P4-9	Arc welded samples	C set: Nov. 17 D set: Nov. 22
8	Metal joining: MIG welding	P6-1, P6-2, P6-3, P6-4, P6-5,	MIG welding samples	Dec. 1/05
9	Metal joining: TIG welding	Handouts	TIG welding samples	Dec. 1/05
10	Final Exam			Week of Dec. 12