

Submit original with signatures + 1 copy + electronic copy to Faculty Senate (Box 7500).  
See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/> for a complete description of the rules governing curriculum & course changes.

<b>TRIAL COURSE OR NEW COURSE PROPOSAL</b>
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**SUBMITTED BY:**

<b>Department</b>	<b>Diesel Technology</b>	<b>College/School</b>	<b>UAF/CTC</b>
<b>Prepared by</b>	<b>Julie Wegner</b>	<b>Phone</b>	<b>455-2902</b>
<b>Email Contact</b>	<b><a href="mailto:jmwegner@alaska.edu">jmwegner@alaska.edu</a></b>	<b>Faculty Contact</b>	<b>Brian Rencher 455-2843</b>

<b>1. ACTION DESIRED</b> (CHECK ONE):	Trial Course	<input type="checkbox"/>	New Course	<input type="checkbox"/>	<b>XXX</b>
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<b>2. COURSE IDENTIFICATION:</b>	Dept	<b>DSL</b>	Course #	<b>F210</b>	No. of Credits	<b>2.0</b>
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Justify upper/lower division status & number of credits:

**Certificate level requirement**

<b>3. PROPOSED COURSE TITLE:</b>	<b>Heavy Equipment Fabrication</b>
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<b>4. To be CROSS LISTED?</b> YES/NO	<b>NO</b>	If yes, Dept:	<input type="checkbox"/>	Course #	<input type="checkbox"/>
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(Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)

<b>5. To be STACKED?</b> YES/NO	<b>NO</b>	If yes, Dept.	<input type="checkbox"/>	Course #	<input type="checkbox"/>
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<b>6. FREQUENCY OF OFFERING:</b>	<b>Spring semester every year</b>
	Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) – or As Demand Warrants

<b>7. SEMESTER &amp; YEAR OF FIRST OFFERING</b> (AY2011-12 if approved by 3/1/2012; otherwise AY2012-13)	<b>AY2013-14</b>
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**8. COURSE FORMAT:**

NOTE: Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school's curriculum council. Furthermore, any core course compressed to less than six weeks must be approved by the core review committee.

<b>COURSE FORMAT:</b> (check all that apply)	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input type="checkbox"/>	6 weeks to full semester
<b>OTHER FORMAT</b> (specify)	<b>5 hours a day for 10 days (1+ 2)</b>											
<b>Mode of delivery</b> (specify lecture, field trips, labs, etc)	<b>Lecture and Lab</b>											

<b>9. CONTACT HOURS PER WEEK:</b>	<b>1</b>	LECTURE hours/weeks	<b>2</b>	LAB hours /week	<input type="checkbox"/>	PRACTICUM hours /week
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Note: # of credits are based on contact hours. 800 minutes of lecture=1 credit. 2400 minutes of lab in a science course=1 credit. 1600 minutes in non-science lab=1 credit. 2400-4800 minutes of practicum=1 credit. 2400-8000 minutes of internship=1 credit. This must match with the syllabus. See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/guidelines-for-computing-/> for more information on number of credits.

<b>OTHER HOURS</b> (specify type)	<input type="text"/>
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10. **COMPLETE CATALOG DESCRIPTION** including dept., number, title, credits, credit distribution, cross-listings and/or stacking (50 words or less if possible):

DSLT F210 Heavy Equipment Fabrication  
 2 Credits – Offered Spring semester  
 Prerequisite: DSLT 110

Students will learn advanced concepts of industrial fabrication in the maintenance of heavy duty equipment, develop a strong understanding of metals and there applications, and have the ability to bend, heat, and apply welding techniques that will support heavy duty equipment for long term use. Special fees apply. (1+ 2)

11. **COURSE CLASSIFICATIONS:** Undergraduate courses only. Consult with CLA Curriculum Council to apply S or H classification appropriately; otherwise leave fields blank.

H = Humanities  S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core? **If YES, attach form.** YES:  NO:

IF YES, check which core requirements it could be used to fulfill:

O = Oral Intensive,  Format 6 W = Writing Intensive,  Format 7 Natural Science,  Format 8

12. **COURSE REPEATABILITY:**

Is this course repeatable for credit? YES  NO

Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time).

How many times may the course be repeated for credit?  TIMES

If the course can be repeated for credit, what is the maximum number of credit hours that may be earned for this course?  CREDITS

If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course?  CREDITS

13. **GRADING SYSTEM:** Specify only one. Note: Later changing the grading system for a course constitutes a Major Course Change.

LETTER:  PASS/FAIL:

**RESTRICTIONS ON ENROLLMENT (if any)**

14. **PREREQUISITES**  DSLT F110 Basic Industrial Fabrication

These will be required before the student is allowed to enroll in the course.

15. **SPECIAL RESTRICTIONS, CONDITIONS**  Department/Instructor Approval

16. **PROPOSED COURSE FEES**  \$150.00

Has a memo been submitted through your dean to the Provost for fee approval? Yes   
 Yes/No Consumable materials fee

17. **PREVIOUS HISTORY**

Has the course been offered as special topics or trial course previously?  NO  
 Yes/No

If yes, give semester, year, course #, etc.:

18. ESTIMATED IMPACT

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

None

19. LIBRARY COLLECTIONS

Have you contacted the library collection development officer (kljensen@alaska.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

No

Yes

Already have book selected for course and checked availability

20. IMPACTS ON PROGRAMS/DEPTS

What programs/departments will be affected by this proposed action? Include information on the Programs/Departments contacted (e.g., email, memo)

This class will affect the welding program and diesel technology program. The request is from Brian Rencher, Coordinator for both programs. bkrencher@alaska.edu

21. POSITIVE AND NEGATIVE IMPACTS

Please specify positive and negative impacts on other courses, programs and departments resulting from the proposed action.

This course will increase diesel/heavy duty equipment credit courses, which will allow students to learn specific techniques for working on heavy duty equipment. It will allow more students to enroll in the diesel and welding programs with the ability to stay in their specific field of choice and gain pertinent knowledge.

JUSTIFICATION FOR ACTION REQUESTED

The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. Use as much space as needed to fully justify the proposed course.

This class will teach students advanced skills in industrial fabrication specific to heavy duty equipment. Students will learn to choose the proper materials for the repair, bending and heating techniques, application of welds, etc. to repair heavy duty equipment for long term use. Repairs in and out of the field require special attention to detail to ensure materials are applied in the proper way to withstand the wear and tear on heavy equipment. Adding this course is field specific to our program and will increase our student's knowledge for entering the workforce.

APPROVALS: Add additional signature lines as needed. AS PER ATTACHED.

	Date	
Signature, Chair, Program/Department of:		

	Date	
Signature, Chair, College/School Curriculum Council for:		

	Date	
Signature, Dean, College/School of:		

	Date	
Signature of Provost (if applicable)		

Offerings above the level of approved programs must be approved in advance by the Provost.

services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

No	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	Already have book selected for course and checked availability
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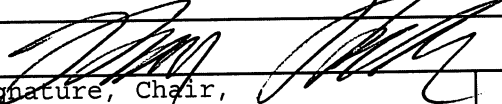
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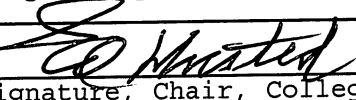
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**APPROVALS: Add additional signature lines as needed.**

	Date	10-9-12
Signature, Chair, Program/Department of:		

	Date	11-6-12
Signature, Chair, College/School Curriculum Council for: ETC		

	Date	
Signature, Dean, College/School of: ETC		

	Date	
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Signature of Provost (if applicable)

Offerings above the level of approved programs must be approved in advance by the Provost.

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

	Date	
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Signature, Chair

Faculty Senate Review Committee: \_\_\_Curriculum Review \_\_\_GAAC

\_\_\_Core Review \_\_\_SADAC

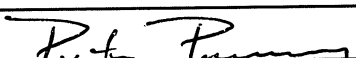
ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

	Date	
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Signature, Chair,  
Program/Department of:

	Date	
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Signature, Chair, College/School Curricula  
Council for:

	Date	12/3/12
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Signature, Dean, College/School  
of:

CRCP

**ATTACH COMPLETE SYLLABUS (as part of this application).** Note: The guidelines are online:

<http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/uaf-syllabus-requirements/>

The Faculty Senate curriculum committees will review the syllabus to ensure that each of the items listed below are included. If items are missing or unclear, the proposed course (or changes to it) may be denied.

**SYLLABUS CHECKLIST FOR ALL UAF COURSES**

During the first week of class, instructors will distribute a course syllabus. Although modifications may be made throughout the semester, this document will contain the following information (as applicable to the discipline):

**1. Course information:**

Title,  number,  credits,  prerequisites,  location,  meeting time (make sure that contact hours are in line with credits).

**2. Instructor (and if applicable, Teaching Assistant) information:**

Name,  office location,  office hours,  telephone,  email address.

**3. Course readings/materials:**

Course textbook title,  author,  edition/publisher.

Supplementary readings (indicate whether  required or  recommended) and  any supplies required.

**4. Course description:**

Content of the course and how it fits into the broader curriculum;

Expected proficiencies required to undertake the course, if applicable.

Inclusion of catalog description is *strongly* recommended, and

Description in syllabus must be consistent with catalog course description.

**5.  Course Goals (general), and (see #6)**

**6.  Student Learning Outcomes (more specific)**

**7. Instructional methods:**

Describe the teaching techniques (eg: lecture, case study, small group discussion, private instruction, studio instruction, values clarification, games, journal writing, use of Blackboard, audio/video conferencing, etc.).

**8. Course calendar:**

A schedule of class topics and assignments must be included. Be specific so that it is clear that the instructor has thought this through and will not be making it up on the fly (e.g. it is not adequate to say "lab". Instead, give each lab a title that describes its content). You may call the outline Tentative or Work in Progress to allow for modifications during the semester.

**9. Course policies:**

Specify course rules, including your policies on attendance, tardiness, class participation, make-up exams, and plagiarism/academic integrity.

**10. Evaluation:**

Specify how students will be evaluated,  what factors will be included,  their relative value, and  how they will be tabulated into grades (on a curve, absolute scores, etc.)

Publicize UAF regulations with regard to the grades of "C" and below as applicable to this course. (Not required in the syllabus, but may be a convenient way to publicize this.) Faculty Senate Meeting #171:

<http://www.uaf.edu/uafgov/faculty-senate/meetings/2010-2011-meetings/#171>

**11. Support Services:**

Describe the student support services such as tutoring (local and/or regional) appropriate for the course.

**12. Disabilities Services:**

The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials.

State that you will work with the Office of Disabilities Services (208 WHITAKER BLDG, 474-5655) to provide reasonable accommodation to students with disabilities.

# DSLT F210 – HEAVY EQUIPMENT FABRICATION

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**Instructor:** Brian Rencher

**Class Dates:**

**Room:** 147 Hutch

**Office Hours:** 2:00pm – 9:00pm

**Office Phone:** 907-455-2843

**Cell Phone:** 907-460-6332

**E-mail:** [bkrencher@alaska.edu](mailto:bkrencher@alaska.edu)

**Hours:** Monday – Friday

Theory 3:00pm – 5:00pm

Dinner 5:00pm – 5:30pm

Shop/Lab 5:30pm – 8:30pm

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## Supplies required:

Reading material: Welding Principles and Applications

Misc hand tools: Per handout

Protective clothing: Coveralls with sleeves

Protective footwear: Above ankle boots

Eye protection: Safety glasses

Misc materials: Paper pad and pen (for instructions)

## Course goals:

Students will learn advanced concepts of industrial fabrication in the maintenance of heavy duty equipment, develop a strong understanding of metals and their applications, and have the ability to bend, heat, and apply welding techniques that will support heavy duty equipment for long term use.

## Course objectives:

Upon completion of this course, the student should have the following:

1. Ability to perform intermediate fabrication skills on equipment
2. Identify different types of metals
3. Knowledge of heating techniques
4. Ability to bend heavy duty metals
5. Knowledge of which weld to use when, under what application

## Course policies:

- Cell phones are not permitted during class hours (theory or shop/lab).
- A fifteen minute break will be given between theory and shop/lab at 5:00pm. This thirty minute break for lunch is the only allowable breaks without instructor's permission.
- No smoking inside the building or on school property at any time (per CTC/Hutchison Policy)
- All students are governed by the UAF Student Code of Conduct as it is applicable.
- Safety glasses are to be worn at all times in the shop area.
- Textbook, paper pads and pen are to be brought to class every day.
- During a fire alarm, students will gather in the CTC parking area with others from the class and will stay there until authorized by the instructor.
- Students are required to use a time clock when starting the day, going to lunch, returning from lunch and ending the day. Students are also required to keep a daily log of shop/lab projects. This will be discussed on a weekly basis between student and instructor as well as the previous week's grading point.

- Each student is responsible for documenting requirements on procedures in the shop/lab. (Example: When given instruction on a project, it is the student's responsibility to write down the given tasks.)
- All CTC shop tools are to be signed out by the daily assigned Forman of the shop and are to be returned at the end of each day to the instructor/Forman.
- Students are required to be working the entire time while in shop/lab. If your task is complete, you are expected to clean the shop, study text book or service manual, or ask the instructor for a task to fill in time.
- Each student is responsible for cleaning their own work area on a daily basis and keeping it clean and orderly throughout the day. No students are to remove coveralls or leave for the day until the entire shop is clean and authorized by the instructor/Forman.
- When lifting any item over an estimated 40 lbs, ask instructor for approval.
- When using the overhead hoist, cranes, roll around picking hoist or forklift for lifting, you **MUST** get instructors approval of the rigging before lifting.
- Any student that is injured during class is required to inform the instructor immediately, no matter how minor the injury.
- No earphones or personal music devices are allowed during class theory or shop/lab.
- Students that do not follow the above outlined regulations can be withdrawn from the diesel program by the instructor.

**The following is the grading scale for this class:**

Attendance	25%			
Instructor Evaluation/Hands on Performance	25%			
Exams	50%			
<b>GRADE POINTS</b>				
A > 90%	B = 85% - 89%	C = 80% - 84%	D = 70% - 79%	F < 69%

**Grading policies:**

- 80% Attendance is required.
- 25% of your grade will be based on attendance, participation and completed engine performance based on the instructor's evaluation.
- 25% of your grade per week is determined by a once-a-week exam quiz, either written or verbal.
- Grading safety is an important part of this course and this industry, therefore any safety violations will result in a loss of 50% of daily points.
- A student, who is unable to attend class, should call and inform the instructor before class starts or make previous arrangements. This will allow students two points for the missed day. Otherwise zero points will be given for the missed day. Students can call office at 455-2843 if the instructor is not able to be reached.
- If a student is absent, it is their responsibility to get the information that was covered during their absence. The student is expected to take the weekly test/exam at the same time as all the other students in the class regardless of absenteeism.
- Exams/quizzes will be given once a week. Any make-ups will be dealt with on an individual basis.
- Tardiness is defined as up to one hour from class start time and will result in a loss of two points for the day.

This system cannot be altered after the first class meeting

**NOTICE TO STUDENTS**



The following services are available to all students: The Writing Center (8<sup>th</sup> floor, Gruening, 474-5314) and the Math Lab (305 Chapman), both of which provide excellent advice, tutoring and assistance; and/or Office of Student Support Services (508 Gruening, 474-6844). Also available is the Student Assistance Center at CTC which offers many services such as: academic advising, placement testing, career assessment, career counseling, computer support, math labs, tutors/tutoring, and a writing center. The center is located at 604 Barnette St. and is open M-F from 8am-5pm. For more info contact the center at 455-2899.

### **Disabilities Services**

The office of Disability Services, 204 WHIT, 474-7043, implements the Americans with Disabilities Act (ADA), and insures that UAF Students have Equal Access to the campus and course materials. The CTC Office of Student Assistance can also help you if you have any of these concerns. Contact them at 455-2899 if you need help.

### **UAF Disability Services for Distance Students**

UAF has a Disability Services office that operates in conjunction with the Community and Technical College. Disability Services, a part of UAF's Center for Health and Counseling, provides academic accommodations to enrolled students who are identified as being eligible for these services.

Any student who feels discouraged or disappointed with instruction, curriculum or other, please notify the Diesel Coordinator, Brian Rencher at 907-455-2843 or the Student Assistant Coordinator, Michelle Stalder at 907-455-2849.

### **EMERGENCY PROCEDURES**

1. Evacuation procedures – see instructions posted in the classroom.
2. First aid kit – located in Equipment Shop 147.
3. Emergency ambulance – from any available telephone, phone “9” to get an outside line, then “911.”  
Campus Police – phone 474-7721    In an “Emergency” dial “911”

### **COURSE OUTLINE:**

Day 1: Go over Syllabus

Review: Safety – Safety Video

Review: Use of oxygen/acetylene torches and plasma torches

Review: Metal types

Review: Heating metals

Day 2: Chapter 3 – Shielded Metal Arc Equipment

Video: Use of shielded metal arc fabrication

Lab: Instructor demo – using the shielded metal arc welding machine

Day 3: Review: Chapter 3 and end of chapter questions in class

Chapter 4 – Discussion – shielded metal arc plates

Lab: Students practice setting adjustments and using shielded metal arc welding machine

Day 4: Review: Chapter 4 and end of chapter questions in class

Video – Shielded metal arc

Lab: Practice welding and changing electrode angles

Day 5: Theory: Welding positions for types of repairs on trucks and heavy duty equipment

Lab: Students practice more welding techniques

**Test:** Written

Day 6: Theory: Using all combined fabrication skills together – metal, heating, bending, cutting, and welding to repair trucks and equipment

Lab: Exercise of heating, bending, cutting and welding frame brackets

Day 7: Review: Previous days lab exercises - students analyze their work

Lab: Exercise cutting, heating, bending, and welding gusset bracing on trucks and equipment

Day 8: Theory: Working with frame rails, stress points, drilling, heating, bending and welding

Lab: Exercise on frame rails – channel bending, cutting, and welding

Day 9: Review past 8 days

Theory: Inspecting cracks and welds on trucks and equipment

Lab: Exercise – continuation on frame rails and bracing

Day10: **Test** – Written and hands on in lab

I \_\_\_\_\_ have received a copy of the  
DSLTT F210 “Heavy Equipment Fabrication” class syllabus and  
have read and understand the class rules and testing procedures.

\_\_\_\_\_

Date

\_\_\_\_\_

Instructor's signature

\_\_\_\_\_

Date

\_\_\_\_\_

Student's signature