

Submit originals (including syllabus) and one copy and electronic copy to the **Faculty Senate Office**
 See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/> for a complete description of the rules governing curriculum & course changes.

CHANGE COURSE (MAJOR) and DROP COURSE PROPOSAL
 Attach a syllabus, except if dropping a course.

SUBMITTED BY:

Department	Construction Management & Drafting Technology	College/School	CRCD / Community & Technical College
Prepared by	Galen Johnson	Phone	455-2846
Email Contact	gjohns55@alaska.edu	Faculty Contact	Galen Johnson

1. COURSE IDENTIFICATION: As the course now exists.

Dept Course # No. of Credits

COURSE TITLE

2. ACTION DESIRED: Check the changes to be made to the existing course.

Change Course If Change, indicate below what is changing. Drop Course

NUMBER	TITLE	DESCRIPTION
PREREQUISITES*		FREQUENCY OF OFFERING

*Prerequisites will be required before a student is allowed to enroll in the course.

CREDITS (including credit distribution)	<input checked="" type="checkbox"/>	COURSE CLASSIFICATION
ADD A STACKED LEVEL (400/600) Include syllabi.	<input type="checkbox"/>	Dept. <input type="text"/> Course # <input type="text"/>

How will the two course levels differ from each other? How will each be taught at the appropriate level?:

Stacked course applications are reviewed by the (Undergraduate) Curricular Review Committee and by the Graduate Academic and Advising Committee. Creating two different syllabi—undergraduate and graduate versions—will help emphasize the different qualities of what are supposed to be two different courses. The committees will determine: 1) whether the two versions are sufficiently different (i.e. is there undergraduate and graduate level content being offered); 2) are undergraduates being overtaxed?; 3) are graduate students being undertaxed? In this context, the committees are looking out for the interests of the students taking the course. Typically, if either committee has qualms, they both do. More info online - see URL at top of this page.

ADD NEW CROSS-LISTING	<input type="checkbox"/>	Dept. & No.	Requires approval of both departments and deans involved. Add lines at end of form for additional signatures.
STOP EXISTING CROSS-LISTING	<input type="checkbox"/>	Dept. & No.	Requires notification of other department(s) and mutual agreement. Attach copy of email or memo.
OTHER (specify)	<input style="width: 100%;" type="text"/>		

3. 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 and the appropriate Faculty Senate curriculum committee. Furthermore, **any core course compressed to less than six weeks must be approved by the Core Review Committee.**

COURSE FORMAT: (check all that apply) 1 2 3 4 5 6 weeks to full semester

OTHER FORMAT (specify all that apply)

Mode of delivery (specify lecture, field trips, labs, etc.)

4. **COURSE CLASSIFICATIONS:** (undergraduate courses only. Use approved criteria found in Chapter 12 of the curriculum manual. If justification is needed, attach separate sheet.)

H = Humanities S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core? YES NO

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

O = Oral Intensive, W = Writing Intensive, X = Baccalaureate Core
 *Format 6 also submitted *Format 7 submitted

- 4.A Is course content related to northern, arctic or circumpolar studies? If yes, a "snowflake" symbol will be added in the printed Catalog, and flagged in Banner.

YES NO

5. **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 with variable credit, what is the maximum number of credit hours that may be earned for this course? CREDITS

6. **COMPLETE CATALOG DESCRIPTION** including dept., number, title, credits, credit distribution, cross-listings and/or stacking, clearly showing the changes you want made. (Underline new wording ~~strike through old wording~~ and use complete catalog format including dept., number, title, credits and cross-listed and stacked.)

Example of a complete description:

PS F450 Comparative ~~Aberiginal~~ Indigenous Rights and Policies (s)
 3 Credits
 Offered As Demand Warrants
~~Case study~~ Comparative approach in assessing Aberiginal to analyzing Indigenous
rights and policies in different nation-state systems. Seven Aberiginal situations
Multiple countries and specific policy developments examined for factors promoting
 or limiting self-determination. Prerequisites: Upper division standing or permission
 of instructor. (Cross-listed with ANS F450.) (3+0)

CM F142 Mechanical and Electrical Technology
 {4} 3 Credits Offered As Demand Warrants
 Introduces the basic mechanical and electrical systems required in all buildings for the safety, health, comfort, and convenience of the occupants. Emphasizes design criteria, code requirements and interpretation of construction drawings. Special fees apply. ~~(3+2)~~ (3+0)

7. **COMPLETE CATALOG DESCRIPTION AS IT SHOULD APPEAR AFTER ALL CHANGES ARE MADE:**

CM F142 Mechanical and Electrical Technology
 3 Credits Offered As Demand Warrants
 Introduces the basic mechanical and electrical systems required in all buildings for the safety, health, comfort, and convenience of the occupants. Emphasizes design criteria, code requirements and interpretation of construction drawings. Special fees apply. (3+0)

8. **GRADING SYSTEM:** Specify only one.

LETTER: PASS/FAIL:

9. **ESTIMATED IMPACT**

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

The proposed credit reduction and distribution change will match the efficiency of the presently implemented scheduling of 3 hour evening lecture class sessions which are utilized by many workforce development related degree programs and will reduce its cost.

10. 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 X Yes Library resource usage will be unchanged.

11. 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)

The Drafting Technology (DRT) program favors this change as it simplifies CM and DRT student's schedules and will continue to encourage CM students to take additional elective DRT courses.

12. POSITIVE AND NEGATIVE IMPACTS

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

CM and DRT programs and students will benefit from better coordination of evening class schedules and decreased costs.

13. 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. If you ask for a change in # of credits, explain why; are you increasing the amount of material covered in the class? If you drop a prerequisite, is it because the material is covered elsewhere? If course is changing to stacked (400/600), explain higher level of effort and performance required on part of students earning graduate credit. Use as much space as needed to fully justify the proposed change and explain what has been done to ensure that the quality of the course is not compromised as a result.

The proposed credit hour reduction will allow students to complete the lecture-delivered portion of each CM class in a standard one-night-per-week schedule. The proposed credit distribution revision acknowledges the lecture (only) delivery mode presently utilized and the absence of computer aided drafting lab sessions. Course content, while somewhat compressed, will sufficiently introduce students to the basic concepts intended.

APPROVALS: (Additional signature blocks may be added as necessary.)

 Date 1-29-16

Signature, Chair, Program/Department of: Construction Management (CM)

 Date 1-29-16

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

 Date 2/1/16

Signature, Dean, College/School of:

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

Signature of Provost (if applicable) Date

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

	Date	
Signature, Chair		
Faculty Senate Review Committee: ___ Curriculum Review ___ GAAC		
___ Core Review ___ SADAC		

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking; add more blocks as necessary.)

	Date	
Signature, Chair,		
Program/Department of:		

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

	Date	
Signature, Dean, College/School		
of:		

Note: If removing a cross-listing, attach copy of email or memo to indicate mutual agreement of this action by the affected department(s). If degree programs are affected, a Format 5 program change form must also be submitted.

ATTACH COMPLETE SYLLABUS (as part of this application). This list is online at:

<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 is a convenient way to publicize this.) Link to PDF summary of grading policy for "C":

http://www.uaf.edu/files/uafgov/Info-to-Publicize-C_Grading-Policy-UPDATED-May-2013.pdf

11. Support Services:

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

12. Disabilities Services: Note that the phone# and location have been **updated**.

<http://www.uaf.edu/disability/> The Office of Disability Services implements the Americans with Disabilities Act (ADA), and ensures 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.

5/21/2013

CM F142 Format 2 rev.docx

Course Syllabus

Course Title: **Mechanical and Electrical Technology**
Course Number: **CM F142 TE1 CRN XXXXX**
Credits: 3 Credit Hours
Location: Community and Technical College, 604 Barnette St., Rm 311
Meeting Time: Monday 6:00 PM to 9:00 PM (Jan. XX - May XX, 2017)

Instructor: Mark Frame, P.E.
Office hours by appointment only
Phone: XXX-XXXX
Email: _____

Department Contact: Galen Johnson, Coordinator, Construction Management CTC
Rm 320 Phone: 455-2846 gjohns55@alaska.edu
Appointments available at: gjohns55.youcanbook.me
Martha Westphal, Admin. Assistant, 455-2886 mmwestphal@alaska.edu

Course Text: Mechanical and Electrical Systems in Buildings 5th edition ISBN 0-13-801562-7 Janis & Tao, Pearson Prentice Hall Publishers

Course Description: CM F142 introduces the basic mechanical and electrical systems required in all buildings for the safety, health, comfort, and convenience of the occupants. Emphasizes design criteria, code requirements and interpretation of construction drawings.

Class sessions will consist of lectures, discussions, homework, projects and tests with emphasis on realistic assignments that will introduce students to building systems concepts, design parameters and terminology.

CM F142 topics include:

- Introduction to applicable codes & standards and construction specifications & drawings
- HVAC – Psychrometrics, Ventilation/Cooling Loads, Delivery Systems and equipment
- Plumbing equipment and systems
- Fire Protection equipment and systems
- Introduction to electricity
- Electrical Power equipment and systems
- Communications, Life Safety and Security
- Electrical Design and Wiring
- Lighting equipment and systems

Course Goals: This course will introduce a basic knowledge of building mechanical and electrical systems to entry-level construction managers.

Student Learning Outcomes: Upon successful completion of the course, the student will be able to -

- Locate appropriate discipline in design documents and Identify applicable code or standard.
- Summarize the effects of heat transfer, temperature and humidity, building solar design/orientation and fresh air ventilation on human comfort.
- Describe the effect that climate, construction assemblies and construction systems have on the building's insulating capability and heating fuel usage.
- Identify the components and equipment used in HVAC systems.
- Identify sources of potable water, explain the use of regulatory codes for system installations, differentiate between various piping materials and compute the size of piping depending on

system demand and design.

- Identify the elements and the purpose of a separate drainage piping system within a building and define the purpose of venting to the atmosphere and fresh air ventilation on human comfort.
- Understand principles of Watts and Ohm's laws define the behavior of electrical circuits.
- Explain how electrical power is generated and conducted.
- Describe the different types of electrical services, compute building service loads, describe the use of electrical panels, disconnect switches and circuit breakers.
- Identify the requirements for low power systems such as building controls, communication, fire alarm and TV.
- Examine different types of branch circuitry for residential and commercial buildings, identify the materials and methods used, estimate branch circuit loads for lighting, appliances and motors.
- Define various types of interior lighting and lighting levels by activity within building spaces.

Outcome will be assessed by one or more of the following:

- Class Participation
- Projects
- Homework
- Exams

Instructional Methods: Class sessions will consist of lecture/discussions, homework and field trips, when possible.

Course Calendar: See Schedule of Topics attached.

Course Policies and Procedures:

University Policies - Please review all university policies as written in the current UAF catalog.

- Attendance - Students are required to attend regularly and participate actively. Students are responsible for class work even if there is a legitimate excuse for their absence. Team Projects and Lab activities during class will not be repeated for the benefit of absentees.
- Cheating - Any means by which a student uses unauthorized assistance to prepare materials submitted as their own. Cheating is grounds for dismissal from the university. This includes the unauthorized use or exchange of computer files.
- Smoking - No tobacco usage on campus.
- ID Cards - Students should carry their UAF Student ID cards with them whenever they are on campus.

Department Policies

- Emergency Exits – In case of emergency, exit the room into the main corridor. Exits may be reached by going either direction down the corridor. Fire alarm pull stations and fire extinguishers are located in the corridor.
- Food/Drink - Covered drinks are allowed, food is not.
- Grades - Final Grades will be posted to UAOnline.
- Name - Put your name on all papers/projects or you may not receive credit for it.
- Deadlines – Weekly assignments are due at the beginning of the designated following class period. Late work may not earn full credit.

Evaluation:

- Homework: Questions will be assigned from the text book and other sources which are used in presenting scheduled topics.
- Projects: There will be two small projects assigned during the semester based on major learning

fields. Students will be given two weeks to complete the projects.

- Exams: There will be three exams each worth 150 points. They will be "open book". There will be true/false questions, multiple-choice questions and story problems. Questions will be derived from the assigned text reading, lectures, homework and quizzes.
- Makeup Tests: Make-up tests may be given upon approval by the instructor. The time for make-up tests will be arranged directly with the instructor.
- Participation: 10 points will be awarded for on-time attendance and participation in discussion in each class session. Pre-notification of unavoidable absences will garner partial credit versus "no-shows".

Grading Policy: All grades are determined by competency-based criteria evaluation. Students are evaluated on individual performances and are not graded in comparison with other students or normal curve distribution. Letter grades for the course will reflect the *Grading System and Grade Point Average Computation* policy stated in the current UAF catalog. Faculty initiated withdrawals for non-attendance, plagiarism, and disruptive behavior is per current UAF Catalog guidelines.

Grade Tabulation

Homework	200 pts
Projects	200 pts
Exam 1	150 pts
Exam 2	150 pts
Exam 3	150 pts
Participation	<u>150 pts</u>
Total Points	1,000 pts

Grading Scale: (note: no +/- grades)

A	90%
B	80%
C	70%
D	60%

Support Services:

The CTC Student Assistance/Advising Center provides services that contribute to a successful learning experience and transition to a career. Services are available by appointment and on a walk-in basis. Staff at the center recognizes the unique concerns of adult and returning students. Services include preadmission advising, academic assessment and placement advising, financial aid information and application, and assistance with choosing a major. Ongoing academic advising, degree planning and course selection are available. For more information, contact Student Assistance, UAF Community and Technical College, 604 Barnette Street, Fairbanks, Alaska 99701, telephone (907) 455-2800, or visit online at <http://www.ctc.uaf.edu/student/index.html>.

Disability Services:

Disability Services provide a variety of services to assure equal access for all students. Interpreting services, educational assistants, note taking, and exam accommodations for students are the most frequently provided accommodations. The staff of Disability Services works with faculty in arranging appropriate services in the classroom. Questions should be directed to the Director of Disability Services at (907)-474-5655. Visit their website at: <http://www.uaf.edu/disability/index.html>

Title IX:

University of Alaska Board of Regents have clearly stated in BOR Policy that discrimination, harassment and violence will not be tolerated on any campus of the University of Alaska. If you believe you are experiencing discrimination or any form of harassment including sexual harassment, misconduct or assault, you are encouraged to report that behavior. If you disclose sexual harassment or sexual violence to a faculty member or any university employee, they must notify the UAF Title IX Coordinator about the basic facts of the incident. Your choices for disclosure include:

- 1) You may confidentially disclose and access confidential counseling by contacting the UAF Health & Counseling Center at 474-7043;
- 2) You may access support and file a Title IX report by contacting the UAF Title IX Coordinator at 474-6600;
- 3) You may file a criminal complaint by contacting the University Police Department at 474-7721.

SCHEDULE OF TOPICS

CM F142 Mechanical & Electrical Technology
Instructor: Mark Frame

Jan XX – May XX, 2017
Mondays 6:00pm – 9:00pm

Class 01 Jan XX

Introduction: Class Schedule & Syllabus
Browse text: Mechanical and Electrical Systems in Buildings (5th edition) by Janis & Tao

Class 02

Topic: Intro to Mech & Elec Systems and HVAC Fundamentals
Reading: Chapters 1 & 2

Class 03

Topic: HVAC Delivery and Cooling Systems
Reading: Chapter 3 & 4

Class 04

Topic: Heating and Air Handling Systems
Reading: Chapters 5 & 6

Class 05

Topic: Piping & Plumbing Eq. & Systems
Reading: Chapters 7 & 8
Exam #1 Study Review

Class 06

Exam #1

Class 07

Review Exam #1 results
Topic: Fire Protection
Reading: Chapter 9

Class 08

Topic: Intro to Electricity
Reading: Chapter 10

Class 09

Topic: Power Equipment & Systems
Reading: Chapter 11

Class 10

Topic: Comm., Safety, Security Systems and Electrical Design
Reading: Chapters 12 & 13
Exam #2 Study Review

Class 11

Exam #2

Class 12

Topic: Light, Lighting Equip & Systems
Reading: Chapters 14 & 15

Class 13

Topic: Illumination Calcs & Lighting Design
Reading: Chapters 16 & 17

Class 14

Topics: Noise & Vibration and Systems Coordination
Reading: Chapter 18 & 19
Exam #3 Study Review

Class 15

Exam #3

NOTE: Schedule subject to change by Instructor upon prior notice.