

ENSC 2113 Statics – Spring 2015

FACULTY	Assistant Professor: Carisa Ramming	ARCH 101
LECTURE	Monday, Wednesday, Friday: 9:30 - 10:20 am	ES 201B
DISCUSSION	Thursday – Time & Location dependent on section number	
OFFICE HOURS	TBA: Refer to website	
TEACHING ASSISTANTS	TBA: Refer to website	
REQUIRED TEXT	<u>Engineering Mechanics: STATICS</u> , 13 th Ed., Hibbeler, R. C., Prentice Hall, New Jersey, 2012. A text has been placed on reserve in the main library for your convenience. Also, you will need a MasteringEngineering code for online homework. Course ID: ENSC2113SP15	
COURSE INFORMATION	Up-to-date information about the course (Syllabus, Assignments, Examples, Solutions, and images for class examples) may be found on the internet at http://oc.okstate.edu .	
PREREQUISITES	PHYS 1114 or 2014 (Physics 1) and MATH 2144 (Calculus 1). If you haven't successfully completed these courses, see your advisor immediately.	
COURSE OBJECTIVES	Introduce the student to realistic problems in static equilibrium. The student should develop the capability to solve problems involving various types of force systems at rest using vector algebra and the classical laws that govern physical systems at rest.	
EC 2000 OBJECTIVES	Additional objectives in accordance with ABET EC 2000 criteria: (a) An ability to apply knowledge of mathematics, science, & engineering. (e) An ability to identify, formulate, and solve engineering problems.	
LEARNING EXERCISES	The homework problems are to develop proficiency in the analysis of various types of force systems. The laboratories are to provide a hands-on application of force systems.	
EXPECTED PERFORMANCE	The student is expected to have a good working knowledge in Physics and Calculus, as well as develop the ability to analyze various types of force systems. Principles of equilibrium are important in many engineering courses in the curriculum. This course builds upon itself through the semester, thus students must not fall behind in the course.	

CONDUCT

The University's Academic Integrity Policy will be upheld in this and every course, and it is the responsibility of every student to abide by this policy. Any violation of this policy will be dealt with according to policy requirements without exception.

EXAMS

All examinations will be closed book and notes, with calculators required. Exams 1 thru 3 will occur on the dates indicated in the course schedule, which will occur on **Wednesday evenings from 5:30 – 6:30 pm**. The Final Exam will be similar to the 3 hour exams in form, except that it will be comprehensive and cover topics addressed during the semester. Exams will be returned in discussion the following week and any grade concerns must be addressed at that time. "Re-grading" of exams will not occur past this time.

"Makeup" exams will not be given. Only in exceptional circumstances (such as documented illness, death in the family, etc.), will an absence from a scheduled hour exam be excused. **Documentation must be provided. Not knowing or oversleeping is not an excuse.** If a student has been excused from a hour exam, an estimated grade based on the other exams will be substituted for the missing exam in figuring the final course grade. A calculation will be taken of the student's grades on the other two exams and their relationship to general difficulty as measured by the class averages will make up the missed exam score. An example of this calculation is given below:

	<u>Exam 1</u>	<u>Exam 2</u>	<u>Exam 3</u>
Class average	76	71	75
Students score	86	Excused Absence	73
Student score - Class average	10		-2

$$\text{Average difference} = (10 - 2) / 2 = 4$$

$$\text{Student estimated 'score' on Exam 2} = 71 + 4 = 75$$

In order to be excused from a hour exam, the student must submit, as early as possible, a written explanation and justification for the absence, together with any documentation (physician's note, Athletic department request, etc.) This note should also have the student's name, ID number, the date submitted, and must be signed by the student.

NO MORE THAN ONE HOUR EXAM CAN BE MISSED, AND THE FINAL EXAM MUST NOT BE MISSED AS THERE WILL BE NO MAKEUP FOR THIS EXAM.

HOMEWORK

Homework is due at the start of class (8:30), and will be collected at that time. The assignment of homework is considered minimal to develop a proficiency in the course. Late homework **will not be accepted** without the consent of the instructor and will not be accepted except for unusual reasons. Penalties are given for messy and unorganized homework and for homework that does not follow the required format. **HOMEWORK IS NOT TO BE COPIED FROM A SOLUTION MANUAL AND WILL RESULT IN ZERO CREDIT OR NOTED AS AN ACADEMIC INTEGRITY VIOLATION.** Refer to the final two pages of this syllabus for more information on the Academic Integrity Policy. Assignments will consist of three problems per homework set. Two problems will be assigned on online classroom and will be turned in at the start of class. One problem will be assigned online at www.masteringengineering.com.

QUIZZES

Quizzes may be given during both theory and discussion labs. The grade on each quiz will be determined by the instructor.

SEMESTER PAPER

A semester paper will be due April 24th in class. Topics are open and should be something related to engineering or architecture where the student has an interest. The paper should be a full page to a page and a half in length, single spaced, 12 pt font. Failure to complete the paper will result in a 5 percentage point deduction of the final course grade. Submitting the paper late will result in a 2 percentage point deduction of the final course grade.

SEMINARS

Seminars unique to the honors course will occur either during the discussion session or lecture after each of the exams. Failure to attend and participate in a seminar will result in a 3 percentage point deduction of the final course grade for each seminar missed.

FINAL GRADES

In calculating your final grade for the course, the following percentages will be used:

If your Final Exam grade is higher than your hour exam average:

Homework	10%
Quizzes and Participation	5%
Hour Exam Average	35%
Final Exam	50%

If your Final Exam grade is lower than your hour exam average:

Homework	10%
Quizzes and Participation	5%
Hour Exam Average	50%
Final Exam	35%

Final grades will be based on the following percentages and **no curve should be anticipated:**

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

SPECIAL NEEDS Any student who feels they require special accommodations in order to meet course requirements should contact the Office of Student Disabilities Services, who will work with the student to provide reasonable accommodations to ensure a fair opportunity to perform in this class.

COURSE OUTLINE The course schedule is given on the following pages and may be subject to change throughout the semester

HOMWORK FORMAT

Homework will be collected at the beginning of each class period on the day it is due. All homework must be turned in on "Engineering Paper" available at the bookstores. Work is to be presented on one side of the paper and there is to be only one problem per page, using the faint line side of the engineering paper to work problems. Homework format steps include:

- 1) Write out the statement of the problem and what is required (given in text).
- 2) Sketch the given problem (part of the statement).
- 3) Sketch all Free-Body Diagrams showing all dimensions & forces.
- 4) Write out all equations & solutions - It is not sufficient to write numbers in eqn form.
- 5) The answer must be presented to completely define the problem. It is to be set apart from the calculations and underlined or boxed, with proper units given.

Homework must be stapled in the upper left hand corner and folded lengthwise with the dark line on the outside. On the outside of the homework your lab section number (in big print), your last name as given on the class roll followed by your initials, course designation and problem numbers are to be written on the side with punched holes, as shown in the illustration.

11-18-13 ASMT. NO. 3 DOE, JOHN Q. 1/3

PROBLEM NO. 1

NAME, DATE, & ASMT. NO. ON EACH PAGE

NO. OF THIS SHEET

NO. OF SHEETS IN ASSIGNMENT

USE A CONSISTENT LETTERING STYLE—NO SCRIPT/CURSIVE

$F = 100 \#$

$\theta_x = 20^\circ$

$\theta_x = 50^\circ$

DETERMINE THE COMPONENTS OF \vec{F} ALONG (1) x ; (2) x' AND y' ; (3) x' AND y' .

(1) $F_x = F \cos \theta_x = (100\#) \cos 20^\circ = (100\#)(0.940)$
 $F_x = 94.0 \#$

(2) $F_{x'} = F \cos \theta_{x'} = (100\#) \cos 50^\circ = (100\#)(0.643)$
 $F_{x'} = 64.3 \#$
 $F_{y'} = F \sin \theta_{y'} = (100\#) \sin 50^\circ = (100\#)(0.766)$
 $F_{y'} = 76.6 \#$

(3) LAW OF SINES
 $\frac{F_{x'}}{\sin 70^\circ} = \frac{F}{\sin 60^\circ} = \frac{F_{y'}}{\sin 50^\circ}$
 $F_{x'} = (100\#)(0.940/0.866)$
 $F_{x'} = 108.5 \#$
 $F_{y'} = (100\#)(0.766/0.866)$
 $F_{y'} = 88.5 \#$

DIAGRAMS ON LEFT

CALCULATIONS ON RIGHT

BOX ANSWERS

ONE PROBLEM PER SHEET; NEVER WRITE ON BACK

USE ENGINEERING PAPER AVAILABLE AT BOOKSTORES

WORK IN PENCIL NOT INK

FOLD PAPERS TOGETHER ON VERTICAL CREASE

PUT PAPERS IN ORDER

STAPLE ON THIS EDGE

SECTION NO. FOR COURSE (IN HUGE LETTERS)

WRITE YOUR NAME AND COURSE NUMBER

DOE JOHN Q. 1/3

2

DOE, J. Q. ENGSC 2113 0

0



OKLAHOMA STATE UNIVERSITY

SYLLABUS ATTACHMENT

Spring 2015

<http://academicaffairs.okstate.edu/faculty-a-staff>

YOUR SUCCESS AS A STUDENT IS OUR TOP PRIORITY.
THIS INFORMATION IS PROVIDED TO ANSWER QUESTIONS MOST OFTEN ASKED BY STUDENTS.

IMPORTANT DATES

Last day to add a class (without instructor permission)	1/20/2015
Last day to drop a course with no grade and 100% refund	1/20/2015
Last day to add a class (requires instructor & advisor permission)	1/23/2015
Last day to drop a course or withdraw from the University with an automatic "W" and receive a partial refund (requires advisor signature)	1/23/2015
Last day to post 6 week grades	2/24/2015
Last day to file diploma application (for name to appear in Spring Commencement program)	4/1/2015
Last day to drop a class or withdraw from the University with an automatic "W"	4/10/2015
Last day to withdraw from all OSU classes with an assigned grade of "W" or "F"	4/24/2015
Pre-Finals week	4/27/2015 – 5/1/2015
Final examinations	5/4/2015 – 5/8/2015

Note: Outreach, Internet, and short courses have unique drop/add and refund deadlines; lookup the specific deadlines for these courses on the Short, Internet and Outreach Class Schedules page of the Registrar's [website](#).

Spring Semester Holidays

University Holiday	1/19/2015
Students' Spring Break	3/16/2015 – 3/20/2015

DROPPING A COURSE AND WITHDRAWING FROM THE UNIVERSITY

students often confuse these terms. **Dropping a Course** (or courses) may occur during the first twelve weeks of the semester. This means, however, that you are still enrolled in at least one other OSU course. Exceptions to the deadlines above may only be considered by petition due to documented extraordinary circumstances and committee approval. The Retroactive Drop/Withdraw Petition and the Petition for a Refund of Tuition and Fees forms are available on the Registrar's [website](#).

Withdrawing from the university means that you are dropping *all* of your courses and *are no longer enrolled for the current semester*. This may occur until the Friday before pre-finals week. The withdrawal process is initiated with your academic advisor in your student academic services office. For additional information and dates, go to: <http://academicaffairs.okstate.edu/policies-a-procedures/35-adding-a-dropping-policy>

ALERTS AND RESCHEDULING

If the OSU campus officially closes due to inclement weather or other emergencies, alerts are provided to local news media and are posted on the OSU website. Exams, classes, or assignments that are missed in these circumstances may be rescheduled at times that are outside the normal meeting schedule for the class. If valid, documented circumstances prohibit students from attending the rescheduled classes, instructors should provide reasonable alternative means for makeup.

SEEK ANSWERS TO YOUR QUESTIONS

The OSU faculty and staff want you to be successful in your educational pursuits. If you have questions or concerns, seek help EARLY. We are here to assist you.

ACADEMIC INTEGRITY

101 Whitehurst, 405-744-5627 <http://academicintegrity.okstate.edu>
 OSU is committed to maintaining the highest standards of integrity and ethical conduct. This level of ethical behavior and integrity will be maintained in this course. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, fabricating information, helping another person cheat, unauthorized advance access to examinations, altering or destroying the work of others, and altering academic records) will result in an official academic sanction. Violations may subject you to disciplinary action including the following: receiving a failing grade on an assignment, examination or course, receiving a notation of a violation of academic integrity on your transcript, and being suspended from the University. You have the right to appeal the charge. Go to <http://academicintegrity.okstate.edu/> for a video on OSU's academic integrity policy and additional information.



COPYRIGHT & FAIR USE POLICY OF COURSE MATERIALS

Course materials may not be published, leased, sold to others, or used for any purpose other than appropriate OSU-related individual or group study without the written permission of the faculty member in charge of the course and other copyright holders. This paragraph grants you a limited license giving you access to materials for this course, including PowerPoint slides, audio/video recordings, written, or other materials, for appropriate OSU-related educational use only. Lectures should not be recorded without permission from the faculty member and must not be further disseminated or shared.

CLASS ATTENDANCE

Class attendance is a critical component of learning; therefore, you are expected to attend and participate fully in all scheduled class meetings. Many instructors consider attendance so essential that your grade may be affected by your absence. *SOME DEPARTMENTS AND PROFESSORS HAVE MANDATORY ATTENDANCE POLICIES*. If no written attendance policy is provided before the last day to add a class without instructor permission, no penalty may be assessed for class absences although you may not be permitted to make up certain in-class activities. If you are required to participate in official university-sponsored activities or military training, you should receive an excused absence unless the written course attendance policy indicates otherwise. If you will be absent from class for sponsored activities, you must provide prior notification of the planned absence to the instructor. You may be required to submit assignments or take examinations before the planned absence.

PRE-FINALS WEEK POLICY

Final examinations are scheduled at the end of each semester and are preceded by pre-finals week, which begins seven days prior to the first day of finals. During pre-finals week, all normal class activities will continue; however, no assignment, test, or examination accounting for more than 5% of the course grade may be given; and no activity or field trip may be scheduled that conflicts with another class. This excludes makeup and laboratory examinations, out-of-class assignments (or projects) made prior to pre-finals week and independent study courses.

No student or campus organization may hold meetings, banquets, receptions, or may sponsor or participate in any activity, program, or related function that requires student participation. For additional information, contact the Office of Academic Affairs, 405-744-5627, 101 Whitehurst.

FINAL EXAM OVERLOAD POLICY

In the event that you have three or more final exams scheduled for a single day, you are entitled to arrange with the instructor of the highest numbered course (4 digit course number) or two highest, if you have four finals on one day, to re-schedule that examination(s) at a time and place of mutual convenience during final exam week. If the final exam overload includes a common final exam, the common final exam is excluded from rescheduling unless multiple common exams are scheduled at the same time. You should submit this request in writing, with a copy of your class schedule, at least two weeks prior to the beginning of final exam week. The instructor has one week prior to the beginning of final exam week to arrange a mutually convenient time and place for administration of the final exam. After one week, if an agreement cannot be reached, take the request to the department head.

INFORMATION TECHNOLOGY

Student Email - OSU uses your OKSTATE.EDU email address as a primary form of communication. Students are expected to check their OSU email on a frequent and consistent basis to remain informed of their official university business. If you do not use the OSU email system you must redirect your okstate.edu email using the Orange-Key System (www.okey.okstate.edu). Failure to maintain an accurate email address may result in missed or lost university communications. For email assistance contact the IT Helpdesk at 405-744-HELP (4357).

Computer Labs - A complete description of computer labs and hours of operations are available at their website: <https://it.sharepoint.okstate.edu/TechnologySupport/DeskSide/default.aspx>. Lab information is also available by calling the Information Technology Help Desk, 405-744-HELP (4357).

EDMON LOW LIBRARY HOURS

405-744-9775 or 405-744-9741

www.library.okstate.edu

Text 405-592-4128

Sunday	9:00 a.m.-12:00 midnight
Monday-Thursday	24 hours a day
Friday	12:00 midnight-10:00 p.m.
Saturday	9:00 a.m.-10:00 p.m.

*For holiday and intersession hours, check

<http://www.library.okstate.edu/services/hours.htm>

*Contact the following for information on hours of operation:

Architecture Library	405-744-6047
Curriculum Materials Library	405-744-6310
Veterinary Medicine Library	405-744-6655

GENERAL EXPECTATIONS OF STUDENTS

By enrolling at Oklahoma State University, you accept responsibility for complying with all University policies and contracts, and for local, state and federal laws on- or off-campus that relate to the University's mission. **The Student Rights and Responsibilities Governing Student Behavior** document explains the standards of behavior expected of you, processes in place for enforcing the rules, and the University's response to violations <http://studentconduct.okstate.edu/>

In general, the University expects you to respect the rights of others and authorities, represent yourself truthfully and accurately at all times, respect private and public property, and take responsibility for your own actions and the actions of your guests. Call 405-744-5470 for more information.

WHERE TO GO FOR HELP

Instructor - If you have questions regarding your class, talk to your instructor. Faculty members usually include their office hours and/or phone number in the class syllabus. If you cannot locate this

information, set a time to meet with your instructor by speaking with him/her prior to or immediately following your class session or check with the departmental office on when the instructor may be available.

Academic Advisor - All students will benefit by conferring with an advisor on a regular basis. If you do not know your advisor, or are unhappy with your advisor, talk to the Student Academic Services Director for your college.

Academic911.okstate.edu - Your online resource for academic and personal success, sponsored by Student Affairs.

Mathematics Learning Success Center

5th Floor, Edmon Low Library/405-744-5818 <http://www.math.okstate.edu/>

Tutors are available to answer questions for classes ranging from Beginning Algebra through Calculus II. Tutoring for Differential Equations and Linear Algebra is offered at specific times.

Writing Center

440 Student Union/405-744-6671 <http://osuwritingcenter.okstate.edu>

The Writing Center helps writers throughout the composing process; you should plan to visit early and often throughout the semester, not just the day before an assignment is due. Tutors will work with you to improve your brainstorming, organizational, and composing techniques.

Learning & Student Success Opportunity (LASSO) Tutoring Center

021 Classroom Building/405-744-3309 <https://lasso.okstate.edu/>

LASSO offers free individual tutoring for a variety of courses.

University Counseling Services

320 Student Union/405-744-5472 or 405-744-7007 <http://ucs.okstate.edu/>

Professional counselors offer confidential personal and/or career counseling.

Office of Student Disability Services (SDS)

315 Student Union/405-744-7116 <http://sds.okstate.edu/>

According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need special accommodations, you should notify the instructor and request verification of eligibility for accommodations from the Office of SDS. Please advise the instructor of your disability as soon as possible, and contact Student Disability Services, to ensure timely implementation of appropriate accommodations. Faculty has an obligation to respond when they receive official notice of a disability but are under no obligation to provide retroactive accommodations. To receive services, you must submit appropriate documentation and complete an intake process to verify the existence of a qualified disability and identify reasonable accommodations.

Office of Equal Opportunity - 408 Whitehurst/405-744-9153

OSU is committed to maintaining a learning environment that is free from discriminatory conduct based on race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age or protected veteran status. OSU does not discriminate on the basis of sex in its educational programs and activities. Examples of sexual misconduct and/or sex discrimination include: sexual violence, sexual harassment, sexual assault, domestic and intimate partner violence, stalking, or gender-based discrimination. OSU encourages any student who thinks that he or she may have been a victim of sexual misconduct or sexual discrimination to immediately report the incident to the Title IX Coordinator (405-744-9153) or Deputy Title IX Coordinator (405-744-5470). Students may also report incidents of sexual misconduct or sex discrimination to a faculty or staff member, who is then required by federal law (Title IX) to notify the Title IX or Deputy Title IX Coordinator. If a reporting student would like to keep the details confidential, the student may speak with staff in the Student Counseling Center (405-744-5472) or the University's Victim Advocate (Suzanne Burks: 405-744-5458). For more information regarding Title IX violations, please go to: <http://1is2many.okstate.edu>.