

Chemical Engineering 191 "Freshman Seminar"

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Ch En 191
September 4, 2014

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Welcome to BYU!!



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Class Outline Today

1. Roll, Introductions
2. Chemistry & Math
3. Syllabus, Schedule
4. Being Master of Your Own Learning
5. Resume Assignment
6. Master of Learning Assignment

Chemistry & Math

You need to be in or have taken

- Freshman chemistry (Chem 111 or 105)
- Calculus (Math 112)

If not, please see a professor in ChE

2. Syllabus, Schedule

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Class Objectives

Chemical Engineering 191 is a seminar designed to help chemical engineering freshmen and transfer students:

1. Gain knowledge of the chemical engineering major and required curriculum
2. Gain familiarity with the chemical engineering field, career options, and potential job functions
3. Understand the importance of a well-written resume in obtaining professional employment,
4. Learn to take responsibility for their own learning experience at BYU by maintaining disciplined study habits, and
5. Demonstrate a sense of the importance of lifelong learning.

Registration Requirement

- **New freshmen** must register for and pass **one semester** of ChEn 191
 - Usually during the fall or winter semester of the freshman year
 - Required for graduation in Chem Eng
- Older students who have completed **4 or more full-time semesters**
 - at another university or college, or
 - at BYU as a major in another department,
 - **AND** at least one of those semesters was as a major in an engineering discipline,
 - **are not required to take ChE 191**
 - Fill out and submit a waiver request (the form can be obtained from the Chemical Engineering Department), and the course and the 0.5 credits will subsequently be removed from your requirements

Attendance Requirements

- Minimum of 7 out of 8 class periods
 - Including the Dean's lecture for freshman students
- AIChE meetings do not count but are recommended if they do not conflict
- Roll will be passed around class (be sure to mark it)
- Dean's lecture for new engineering students
 - Topic: Leadership
 - Part of a 4-year plan to teach leadership
 - Th, Oct. 2, 11 am, JSB Auditorium
- Other Dean's lectures, ChE seminars, etc., are good but do not count for attendance in this class

Written Assignments

Each of the following assignments is described in detail on the attached pages and on the course web site (<http://www.et.byu.edu/~tom/classes/191/191.html>).

Due

- | | |
|--------------------------------|----------------|
| 1. Resume | Sept 11 |
| 2. Master of Your Own Learning | Sept 18 |
| 3. ChE video | Oct 2 |
| 4. Career Fair Assignment | Oct 2 |
| 5. Lifelong Learning | Oct 23 |
| 6. Course Plan | see schedule |

Course Plan Assignment

- Make a plan to graduate, assigning each course to a semester**
 - Special Excel worksheet on ChE website to help you do this
 - Prerequisites
 - Many classes only offered once a year
- Meet with your advisor**
 - Your advisor will make sure you did not make a mistake that will cost you an extra year
- Enter your approved plan into MyMap**

Schedule

Class	Date	Subject	Assignment Due
1	Sept 4	Class Intro/Master of Your Learning	
2	11	ChE Major Requirements/Faculty Introductions	Resume
	18	Internships/Resumes (Career Fair)	Master of Learning Assignment
3	25	Career Fair	In Place of Class, WSC Ballroom
4	Oct 2	College New Student Leadership Workshop	Required
5	9	What Do Chemical Engineers Do?	Video Assignment, Career Fair Assignment, Course Plan A-F
6	16	Leadership/Lifelong Learning	Course Plan G-N
7	23	Advice to Freshmen/Role of Women	Lifelong Learning Assignment
8	30	Global Engineering Outreach	Course Plan O-Z, In-class ABET
9	Nov 6	Dean's lecture	Attendance recommended but not required
	13	No Class	
	20	AICHE mtg	Attendance recommended but not required
	27	Thanksgiving Holiday	Hug Grandma and Grandpa!
	Dec 4	No Class	
	11	No Class	

3. Being Master of Your Own Learning

Who Is Responsible For Your Learning?

We (faculty and staff) will help all we can

But our help is like leading a horse to water

Only **YOU** can make sure you “drink”

Only **YOU** can be the...

“Master of your learning”

Don't commit to excessive credits + work

How many hours are there in a week for learning?

Total: 7 days x 24 hours	168 hours
Sunday: the Sabbath	- 24 hours
Sleep: 8 hrs/night x 6	- 48 hours
Meals: 2 hrs/day x 6	- 12 hours
Prayer/scripture: .5 hr/day x 6	- 3 hours
Hygiene: 1 hr/day x 6	- 6 hours
Driving/walking: 1 hr/day x 6	- 6 hours
Social Life: dates, sports	- 6 hours
Family Home Evening:	- 3 hours
Time Remaining	60 hours (or less)

Don't commit to excessive credits + work

How many hours do you need for learning?

In class

Same number as credits
e.g. 15 cr = 15 hrs in class/week 15 hours

Outside of class

Target: 2 hrs outside/hr inside
Technical courses: usually higher (say 2.5)
e.g. 15 cr = 37 hrs/week 37 hours
(note: that's 6 hours study/homework per day)

Time Needed 52 hours (or more)

A Crude Guideline

Work Hours $\leq 60 - 3.5 \times \text{Credits}$

Example: 15 credits means 7.5 work hrs

Really!



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I have talked to a LOT of students who end up on academic probation

Results:

- Unhappy
- Embarrassed
- Loss of scholarship

Most Prevalent Causes:

- Trying to work 20-30 hrs and taking 15-18 credits
- Poor study habits from high school
- Distracted when trying to study in your apartment
- Playing too hard with roommates
- Health issues

We want you to be successful!!!

Make Your Study Environment Conducive to Learning

This will be your most demanding race so far!

3 major steps up from high school
Will require your best race

Facilities:

Space
Lighting
Comfort (but not TOO comfortable!)

Quiet

You need ALL of your
MENTAL and SPIRITUAL horsepower

Consider the library! (not your dorm room)

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Discipline Yourself to Provide Good Study Habits and Quality Time

There will be many distractions and temptations

Study to *learn*,
not just to “get it done” or to “get grades”

Seek to *understand* rather than memorize

The key to success:
study time: quality + quantity

There is NO SUBSTITUTE!

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Schedule Your Study and Homework to Provide Adequate Time to Meet Due Dates

A Metaphor: Surfing



Use a Calendar

Plan Intermediate Mile Posts

I will have the literature search done by...
I will have mastered Chapter 7 by...
I will complete this assignment by... so that I can work on...

Get Ahead - Don't Fall Behind

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I Will Utilize All Important Resources

- Find out about material you missed
don't adopt an “Oh, well...” attitude
take responsibility
- Seek answers to your questions
 - don't let yourself not understand
 - write down questions
 - pursue answers
 - use TA's, instructors, room-mates, etc.
- Seek to learn “by study and also by faith”

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I Will Do All of This... Period

"Perhaps the most valuable result of all education is the ability to make yourself do the thing you have to do, when it ought to be done, whether you like it or not."

Thomas Henry Huxley, in John Bartlett, comp., *Familiar Quotations* (1968), 725.

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President James E. Faust,
BYU Commencement Address, August 1995

"At this stage of your lives, one is justified in asking: What is more important in the learning process, the secular or the spiritual? But I suggest to you that you will learn faster and better and more surely through the spiritual. Through the gift of the Holy Ghost we can learn all things. And if that is not enough, we are also told that we can learn the truth of all things. There are three things we should know about the guidance of the Holy Spirit of God: [1] It is very real, [2] it is available to every person *who lives righteously* so as to enjoy it, [3] following it is the sure and only solution to our problems." [italics added]



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"If you don't listen, you'll have to feel."

Mary Elizabeth Cummings
(my wife's mother)

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Are you trying to get a
degree or an education?

Hint: an education includes a degree!

Some students do the bare minimum
to get a degree, but then are not
prepared for a job!

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4. Resume for Career Fair

Joseph A. Cougar	
Current Address: 123 E. 400 N. #1 Provo, UT 84601 (801) 777-0000 jpcougar@gmail.com	Permanent Address: 470 Murray Lane Huntsville, MD 21753 (301) 412-0002
Objective To obtain a summer internship in a chemical engineering or related field	
Education B.S. Chemical Engineering, Brigham Young University, Provo, UT Sep 2007 – Apr 2011 • Elective Courses: Biomedical Engineering, Energy Avg. Cumulative College Grade: 3.0 • Major: Pre-engineering	
Work Experience Research Assistant, Brigham Young University, Provo, UT Jan 2008 – present • Developed automated spreadsheet for data analysis, reducing analysis time by 70% • Developed and analyzed 140 data sets, forming the basis of a publication manuscript Customer Service Agent, L201 Automotive, Huntsville, MD May 2009 – Jul 2009 • Reported and repaired engine, electrical and chassis problems (40%) and saved \$1,000/month • Wrote up and scheduled automotive repair orders • Visually reported and reported operations of customer service area Night Director of Youth Services, Youth Club, Huntsville, MD Oct 2004 – May 2005 • Reported and repaired engine, electrical and chassis problems (40%) • Led a team of 10 youth members (developed training curriculum sessions) • Organized educational and development activities for weekend youth On-site Operator, Neighborhood Lawn Service, Huntsville, MD May 2004 – Aug 2004 • Maintained and performed other yard work for 7 customers	
Volunteer Work Ministry: The Church of Jesus Christ of Latter-day Saints, Utah Jul 2006 – Jul 2008 • Reported and repaired engine, electrical and chassis problems (40%) • Conducted weekly training sessions for local leaders and other volunteers • Translated religious lessons into Spanish and English classes to local residents President of L201 Church Group • President of L201 Church, Huntsville, MD Sep 2008 – present • President of L201 Church, Huntsville, MD Big Brother, Provo High School, Provo, UT (10 hrs/week) Sep 2008 – present	
Awards • Eagle Scout • Scholarship, House Society of Maryland, \$1,000 (one of 27 recipients)	
Skills and Interests • Spanish (proficient reading and speaking) • Outdoor activities (hiking, mountain, canoeing)	

<http://chemicalengineering.byu.edu/resume-guides>

Your Assignment:
Make a trial resume

Due:
Next Thursday
Sept. 11

You will give this
resume to your
advisor to review!

Help Available:
• AICHE
• BYU CHE website

5. Learning Assignment

Due Sept 18 (2 weeks)

- How will I ensure that the combination of my credit hours and employment hours will not be excessive?
- How will I ensure that my study environment (facilities, lighting, comfort, quiet) will be conducive to learning?
- How will I ensure that I apply study habits and discipline to provide adequate quality study time?
- How will I schedule my assignments to allow adequate time to complete them and to meet due dates?
- How will I utilize resources, including help from TAs and faculty, to maximize learning and success?

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Summary

- **Welcome to ChE!** We want YOU to succeed!!
- **We felt strongly** enough about this material to put it into a course!
 1. Manage your time wisely
 2. Find a good place to study
 3. Ask for the Lord's help
- **Review of Assignments**
 1. Mark one of the class rolls
 2. Info sheet (including FERPA signature)
 - Alias for posting grades on web
 3. Resume due next time
 - Bring two copies so two friends can give you comments on your resume
 4. Master of learning assignment in 2 weeks

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