ME 370:
The Mechanical Engineering Profession

Lecture 01: Develop a Career Plan

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Purpose

Develop a career plan
Need for balance

Liebig model of plant health

- Several requirements: all must be present
- Any one component can be the limiting factor
- Imagine a rain barrel having staves of different lengths

*Liebig’s Law of the Minimum*: plant growth is limited by the scarcest resource, not by the total of all resources. See, e.g. [http://en.wikipedia.org/wiki/Law_of_the_Minimum](http://en.wikipedia.org/wiki/Law_of_the_Minimum)
Need for balance

Liebig model of career health

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Need for balance

Liebig model of career health

• Can you accurately describe your strengths and weaknesses?

• Which component is the limiting factor in your career?

• Are you working on your strengths?

• Can you manage your weaknesses?

- Sunlight
- Warmth
- Potasium
- Nitrogen
- Phosporous
- Soil moisture

- Technical skills
- Intellectual property skills
- Communication skills
- Business knowledge
- Knowledge of contemporary issues
- Ethics
SMART Objectives

The SMART criteria can be used to set goals

- Specific
- Measurable
- Achievable
- Realistic
- Time-bound

This week’s readings have more background
Specific

Is the goal understandable to other people?

Is it well-defined?

- Job title(s): real positions in real companies
- Technical specialization
- Management roles?

Short term goals need to be more specific than long term goals.
Measurable

What is your measure of success?

• Title? Salary? Location? Name of company?
• Would not achieving the goal be obvious?

  Work for some company in the northwest
  versus
  Work for Bioject in Tualatin, Oregon

Hold yourself accountable by setting a goal that would be obvious if you missed it.
Attainable

Can you get to the goal?

• Do you have the necessary attributes?
  ‣ Work habits, training, grades
• Is this a competitive goal (e.g. becoming an astronaut)?
• Could others with your background achieve this goal?

Big goals can be attained, but will likely need achievable intermediate goals.
Realistic

Are your priorities aligned with the goal

• Have you demonstrated similar commitment in the past?
• Do other commitments compete for your time?

Are resources and time frame consistent with the goal?

Unrealistic goals guarantee failure. Set goals that teach you how to succeed.
Time-bound

Good goals have deadlines

Five-year career goal has built-in time limit

• Time limit will help determine realizability
• Set intermediate milestones

Ten and twenty year goals should also be developed

Use time to measure progress. Are you willing to keep yourself on track?
Are goals necessary?

No.

• Many engineers have successful careers without planning.
• Career plans will change.
• One’s ability to predict the future is limited.
Are goals helpful?

No doubt.

- Setting goals can make you more conscious of choices.
- Setting goals can make you active, not passive.

Many people prefer to act willfully, and not accept what happens to fall their way.