ITESM Campus Monterrey
Mathematical Physical Modelling F4005
EM 2019

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Contents

About the course

Graduate course of applied math in which mathematical thinking and analysis is used to model and determine solutions of various problems that arise in engineering.

Since this is a math course . . .

F4005 = linear algebra + vector calculus + Fourier analysis + partial differential equations (the so-called PDEs).

Common student questions and some advice

Will I ever sleep?
Are you a harsh grader?

Expect to work hard but sleep deprivation is not suggested at all; try to be **disciplined**, **organized** and focus on understanding the key concepts instead of memorizing the problems.

I do not consider myself a harsh grader but rather a fair grader; expect challenging problems but I'm on your side: feel free to ask for help!

Class attendance

I will **not** consider class attendance as part of the final grade. This is a graduate course, you should already know that attending lectures is your responsibility.

During certain lectures, I will give some math tricks or shortcuts, so missing lectures is not a good idea.

Suggested reading list

1. O'Neil, Peter. Advanced engineering mathematics, Thomson, 2007.
2. Zill, Dennis. Advanced engineering mathematics, Jones and Bartlett Publishers, 2011.

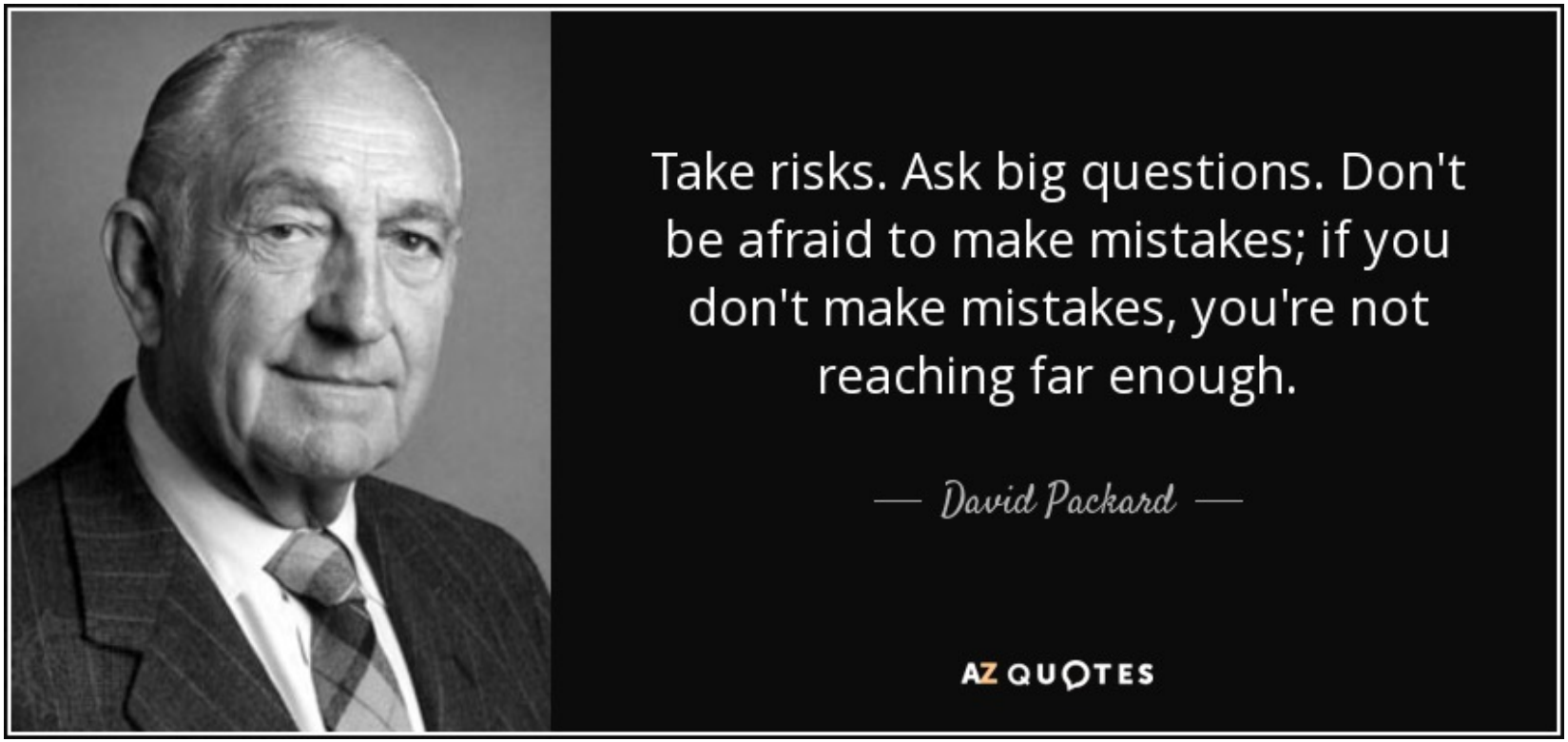
Office hours

- Aulas 3: **Monday 10-11 am; Thursday 1-2 pm or by appointment** (feel free to contact me).
- Please prepare your doubts and questions in advance so we can take full advantage of time during office hours.
- There are no office hours on the exam day.

More advice

- Please refrain from using your cell phone during class, the lectures only last an hour and a half!
- Never be afraid to ask doubts.

About questions . . .



Homework

• Homework will be uploaded to Blackboard and must be solved in teams of up to 5 students. Please make sure you can solve all the problems on your own.

• Each assignment must be submitted by e-mail no later than the stated date. **No late homework will be accepted**.

• Keep assignments clean and professional.

• I encourage the use of LaTeX for typed solutions; **extra credit will be given if you use LaTeX.**

Exams

- I will provide you with a formula sheet during exams; math is about reasoning and not memorization.
- The final exam is cumulative.

Grading policy for the overall final grade

- First (partial) period: 30 %.
- Second (partial) period: 30 %.
- Final period: 40 %.

Grading policy for each partial period

- Written exam: 80 %
- Homework: 20 %

Grading policy for the final period

- Final exam: 70 %
- Project: 15 %
- Homework: 15 %

Exam dates

- **First** partial exam: February 14.
- **Second** partial exam: March 28.
- **Final** exam: May 20, 8 am.

Any questions?