University of Glasgow

UoG / UESTC Joint School of Engineering

UESTC 3031: Engineering Project Management & Finance

Overview of the Course

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Engineering Project Management & Finance

- EP&FM: Semester 2
  - Company Structures & Organisation
  - Project planning & Management
  - Finance for Engineers
  - Design for Manufacturing
  - The role of senior engineers
- This course will NOT make you an expert in any of these, it WILL give you a basic introduction to all of them
  - These subjects **will** make you stand out in a job interview!!

"You are here to learn the subtle science and exact art of Engineering"

Severus Snape [adapted from Harry Potter & the Philosopher's Stone; Rowling, J K (1997)]

Overview of the Course

Course Structure: 32 Lectures in Semester 2 (15 Credits)

- There will be significant reading in this course; you must study the material before the lectures
  - The material will be available on Moodle for you
  - The discussion sessions are interactive learning sessions

Assessment

- The Course Assessment will be in two parts
  - 25% will be on a written piece work
  - 75% will be on a written examination at the end of semester 2

Note: the Team Design projects will use the skills and techniques taught in Professional Practice as part of the project assessment

Hints and Tips for this course

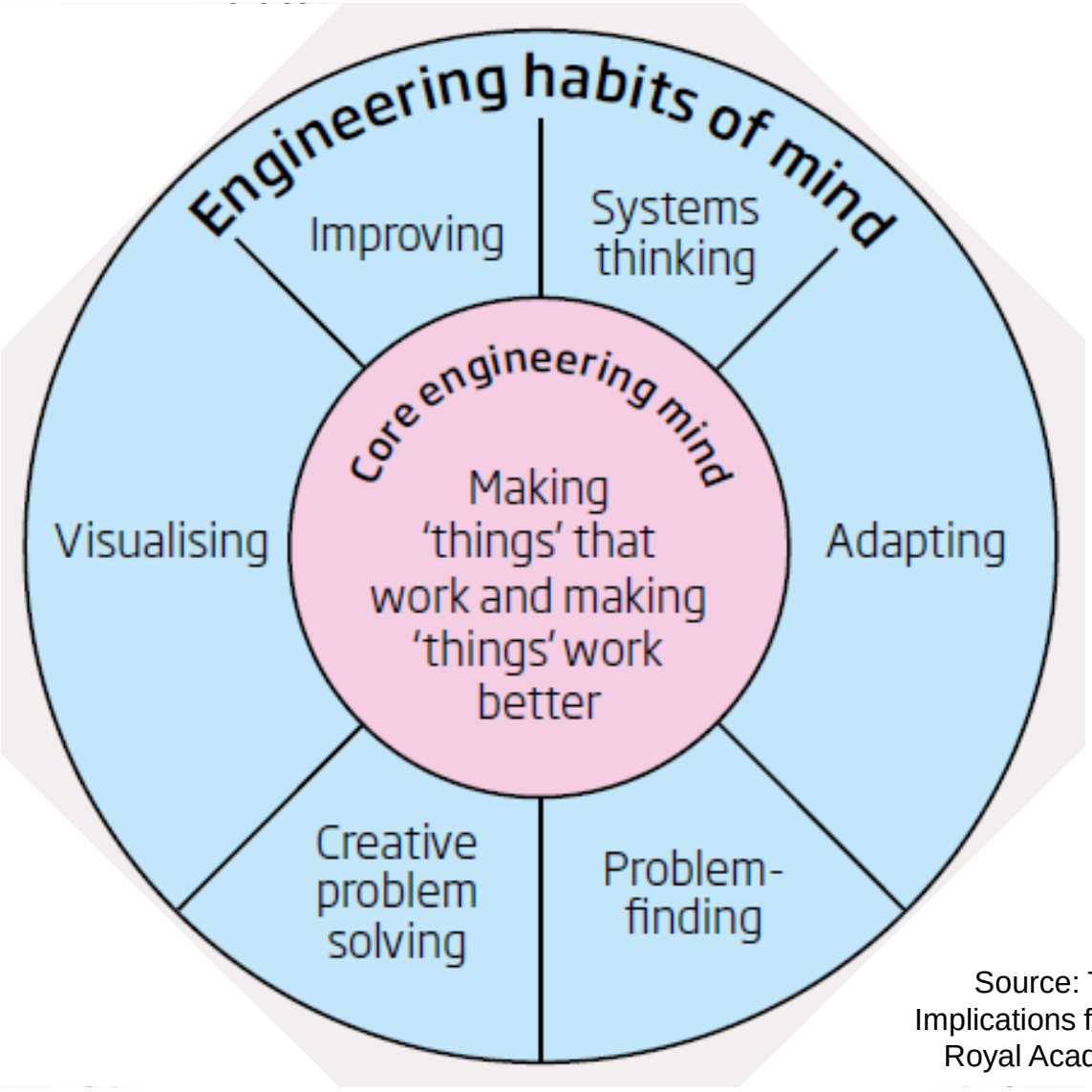
- EPM&F is different from your other engineering courses
  - There is relatively little mathematics / physics needed
  - It is developing your ‘Critical Reading and Writing’ skills
  - There are many ‘right’ answers; and also many ‘wrong’ ones

- EPM&F is developing the way you ‘think’ as an engineer
  - Extract & understand the problem and constraints in context
  - Propose a solution and justify your approach
  - Present your solution and how you will deliver it

- In EPM&F, think about the end goal, not just about the methodology; is it what the customer wanted?
  - Always check your end goal against the original constraints

In EPM&F, if you start using complex maths /engineering STOP! You are probably overthinking the problem…

Engineering Habits of Mind



Source: Thinking Like an Engineer: Implications for the Education Systems; Royal Academy of Engineering(2014)

Hints and Tips (contd)

- Reading tricks
  1. Learn to read quickly but thoroughly; do not sacrifice accuracy!
  2. Learn to scan documents to get the main points; then re-read the relevant / important parts.

     Show video
  3. After large paragraphs or sections, reflect on what you have read. Did it make sense? Did it agree with your hypothesis?
  4. Learn to filter ‘important’ text from ‘filler’ text
  5. Use post-its / highlighter (or electronic equivalent) to mark the key points.
  6. Make notes as you go; it is easier to mark the key points as you go rather than summarise at the end. Use your own words!

Remember: Engineers are ALWAYS approximate, but NEVER inaccurate!

Follow up reading:

- Read the following:

- Thinking Like an Engineer: Implications for the Education Systems; Royal Academy of Engineering(2014)
  - **Executive Summary: pp 3**
  - **Engineering Habits of Mind; sect. 3.3 pp 21-28**

Skim | Read | Understand | Critique