What does it mean to be a professional engineer?

Four pillars of being a professional:

1. Communication
2. Teamwork
3. Resilience
4. Technical Skills
Communication

Does everyone understand what you're working on?
Communication

Making sure everyone understands what you’re doing

- Problem solving in teams involves shared understanding
- In order to solve human problems, we must understand what people need and how we can help them
- The more we communicate with computers the more risk we have of treating people like machines
- The ability to explain our code is important to keep us on track
- It’s especially important to be able to explain your code to non-programmers
Teamwork

Code is very rarely created alone

Teams that get along are usually more successful than teams of pure skill
Teamwork

Code is very rarely created alone

- Teamwork involves sharing and compromise
- Can you work with other people’s ideas?
- Can you follow someone else’s style and structure?
- Can you adapt your structure so that other people can use it?
- Can you provide support to your teammates?
- Teams made of people who get along are usually more successful than teams made of very skilled individuals!
Resilience

Work is hard. We need to look after ourselves

- You shouldn't have to "survive" your job
-Dealing with "impossible situations"
- Failure is inevitable, what counts is how you recover, not whether you fail
Technical Skills

How’s your programming?

- Yes, this comes last in the list
- It's still important but it can't be your only focus
- We have the majority of our degrees to learn technical programming
More about Resilience and Surviving

You have an assignment due soon

- Success isn’t about getting everything done
- It’s about prioritising your effort so you don’t have to do as much work!

Priorities:

- What gets you the most marks with the least amount of time?
- Code Style?
- Clean, basic functionality?
- There are more marks in the earlier stages than later
- Aim for what you can achieve without burning out
Don’t Panic!

Surviving is about acting rationally in panicky situations

- Take a moment to breathe
- Figure out what your options are
- Break problems down into small bits
- Complete small pieces one at a time
- Aim for whatever gets you enough

WORKING LIKE CRAZY ON THE HARDEST THING YOU CAN THINK OF AND THEN FAILING

AIMING FOR JUST ENOUGH TO MAKE YOURSELF HAPPY
Who can become a professional?

You. The answer is you.

- No one knows what they're doing
- Everyone who looks like they know what's going on is just hiding it better
- Or lying to themselves
Becoming a Professional

It doesn't have to happen yet . . . and it's always ongoing learning!

- Remember to communicate with colleagues
- Follow as well as lead when you're in a team
- Look after yourself
- And above all . . .
- Care about yourself, the people around you and your work
Learning is more important than success

Learning something new is better than being good at something!

Remember . . . as nice as high marks are, they're not the same as long term fulfilment

"I don't care who you are, where you're from, what you've done . . . as long as you love C." - The Backstreet Boys (definitely not misquoted at all)