

AY2025-2026 Semester I

IE5121

Quality Planning and Management

Prof Goh Thong Ngee

Semester I, AY2025-2026



In failures of existing goods or services...

*Is there TECHNOLOGY?
Is there INNOVATION?*

Management of Technology and Innovation (MOTI)

The very first sentences in the introduction of the MOTI MSc program on the website of the Industrial Systems Engineering and Management Department:

How do companies and organizations gain *sustainable* competitive advantage through technology and innovation?

How do companies and organizations create, capture and deliver *value* through technology?

These are the fundamental questions we seek to address in the Master of Science in Management of Technology and Innovation (MOTI) program

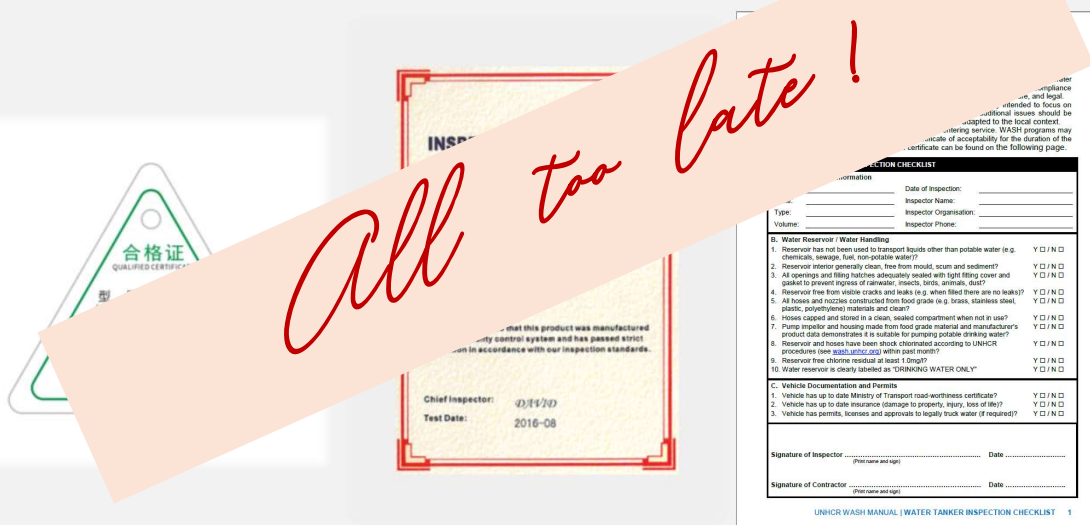
Inevitably the answer has to contain this word:

QUALITY

Why is Quality important?

- “Flash in the pan”? (One-off) Success in research laboratories or prototype design is no guarantee for demonstrable and sustained performance in the real world
- “The proof of the pudding is in the eating”: only when the product of technology and innovation is accepted by the market that success can be assured
- The most important requirement for a product to survive and thrive in a market is **QUALITY**

What is QUALITY?



How to achieve Quality Excellence?

Quality does not happen by itself...

Quality of product has to be **planned** in the beginning
and **managed** constantly thereafter

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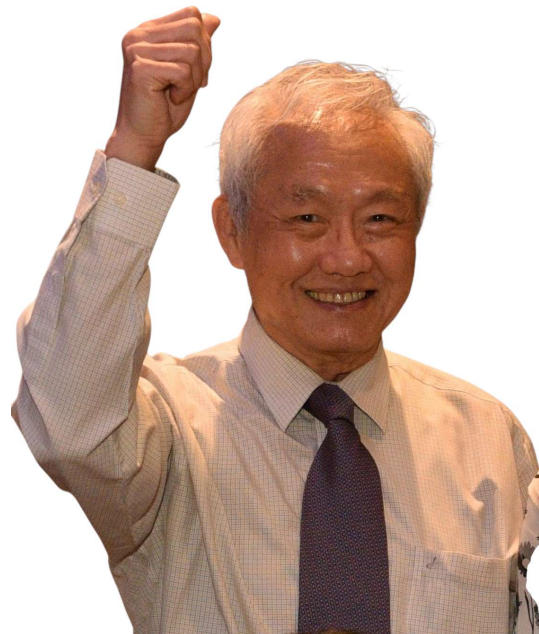
Quality Planning and Management

A course emphasizing:

- An active rather than the traditional defensive and passive approach to Quality
- Aspects of improvement and innovation rather than traditional management techniques
- Strategic approaches to competitiveness rather than application of isolated tools

Instructor: Prof T N Goh, ISEM Dept

- ASQ (American Society for Quality) Eugene L Grant Medalist
- ASQ Statistics Division William G Hunter Award Winner
- ANQ (Asian Network for Quality) Ishikawa-Kano Gold Medalist





Coverage of this course

- Roles of technology and innovation in a VUCA world:

manufacturing and service

- Methodologies in **3P's**:

Principles, Programs, and Procedures



IE5121 Quality Planning and Management

All enterprises in this VUCA world stand or fall, ultimately, on QUALITY.

This course covers the subject via the 3P's of Quality Planning and Management in manufacturing and service: *Principles, Programs, and Procedures*. The emphasis of the course is generic concepts and practical techniques, i.e. the discussion is generally non-industry specific. There is no pre-requisite for this course. Student assessment will be based on class participation, a mid-term test, a course project, and a final examination.