



Success in **an engineering career**

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## JUSTIFICATION



### <What you don't necessarily learn in school>

- ✓ 12 vital insights for **one's engineering career**
- ✓ Things that engineers have to **know** and have to **note** for succeed
- ✓ Advice and recommendation based on **the author's practical experiences**

### <Unwritten law of engineering>

- ✓ The record derived from 17 years of direct observation
- ✓ The experiences of the four engineering departments
- ✓ The guideline for people already in society

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# OUTLINE OF CONTENT

- **Technical Content 1**
- **Technical Content 2**
- **Conclusion**
- **Road Ahead**
- **References**

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# TECHNICAL CONTENT 1

✓ Brief summary of the paper

## <WHAT YOU DON'T NECESSARILY LEARN IN SCHOOL>

**WHAT** provides 12 actions that greatly increase the probability of success as an engineer

**WHO** is described by the author, who gained insights from the various experiences at different sites

**WHY** exists for very promising future engineers

**HOW** proposes 12 answers to the question “How can we succeed in engineering?”

**WHEN** becomes effective when we start to build an engineering careers

**WHERE** is applied in this field

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## TECHNICAL CONTENT 2

✓ Q1. What are the issues that impacted you more ?

➔ **A1-1. Learn to work and network in a new environment**

: Recognizing the importance of **COMMUNICATION**

✓ Companies **operate across a variety of countries**. It is necessary to understand the cultures and languages of different countries before building a successful engineering career.

Engineers should be fluent in various languages to communicate with people from other countries.

✓ Engineers will have to **talk about** the value of own's work, and sometimes experience to **explain what engineers want to say** to customer exactly.

Engineers must be able to communicate briefly and precisely.



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## TECHNICAL CONTENT 2

✓ Q1. What are the issues that impacted you more ?

➔ **A1-2. Expect tough multi – disciplinary problems**

: Learning about **NON-SPECIALIZED AREA**

- ✓ Engineers who work in real industry are **required to know** about not only mechanical engineering but also **other fields.** (e.g. people who in charge of CAE)  
Engineers need to learn the basics of the other fields besides one's specialty
- ✓ Engineers should **meet Needs of customers** and solve some problems. But most of the situations **can not solve solely** by engineering knowledge.  
Engineers need to be good at solving the situations though the various knowledge.



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## TECHNICAL CONTENT 2

✓ Q1. What are the issues that impacted you more ?

➔ **A1-3. Understand the differences between academe and industry**

: Knowing **DISTINCTION** of university and industry

- ✓ The university culture is **quite different** from the engineering, business or government culture, we will likely enter. Engineers must accept and understand differences between university and business.
- ✓ The environment where we will be likely working is very **engineering oriented**, and concentrates on creative engineering design. Engineers have to make an adjustment in engineering mindset as they enter their industry.



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## TECHNICAL CONTENT 2

✓Q2. Discuss about how to embrace the needs of engineering career

01. Learn to be business oriented
02. Expect tough multi-disciplinary problems
03. Learn to work and network in a new environment
04. The differences between academe and industry
05. Learn to differentiate all over again
06. Understand the values, code of conduct and culture
07. Be open to ideas from everywhere
08. Have unyielding integrity
09. Make your manager a success
10. Support your university and technical society
11. Have fun
12. Manage your career

### Our Answer

We

- should be fluent in **various languages** to communicate with people.
- must be able to communicate **briefly and precisely**.
- need to learn the basics of **relevant specialties** other than our major.
- need to be good at solving the situations **through the various knowledges**.
- have to make an adjustment in **engineering mindset** as we enter the industry.
- must **accept** and **understand** differences between academe and industry.



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## CONCLUSION

- The reason why we learn about an engineering career as a university student is that it is very **difficult for new recruit to apply them immediately.**
- Therefore, we must build **relevant experiences** from university years and be familiar with them.
  - That way, we can effectively improve our engineering careers.
- To do so, it would be nice to **experience the company life** in advance when we are university students.
- We are able to gain **a sense of direction** in enhancing our engineering careers.



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## THE ROAD AHEAD



This research paper is such a self-development book. When we read self-development books, we did not do what we have learned and did not practice it. However, we **can not progress without practicing what we learned.** While we read this paper, we realize that we **repeat the same mistakes.**

The most important thing is **Practice.** From this paper, we learned how to improve our engineering careers.

→ We should start with small things in order to achieve bigger goals right now!

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