



Self-development Courses for Dealing with the Transitions

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University education: two transitions

CENG001

CENG002

First transition

Second transition



Academic
development

Professional
development

Course outcomes of CENG001

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- Explain to a laymen the skills and competencies a university graduate in general, and an engineering graduate in particular, should possess.
- Identify your strengths and weaknesses, especially as a learner.
- Identify the skills and competencies that you will need to develop.
- Make concrete plans for self improvement.
- Develop the habits to become a **reflective, self-regulated learner**.



Topics

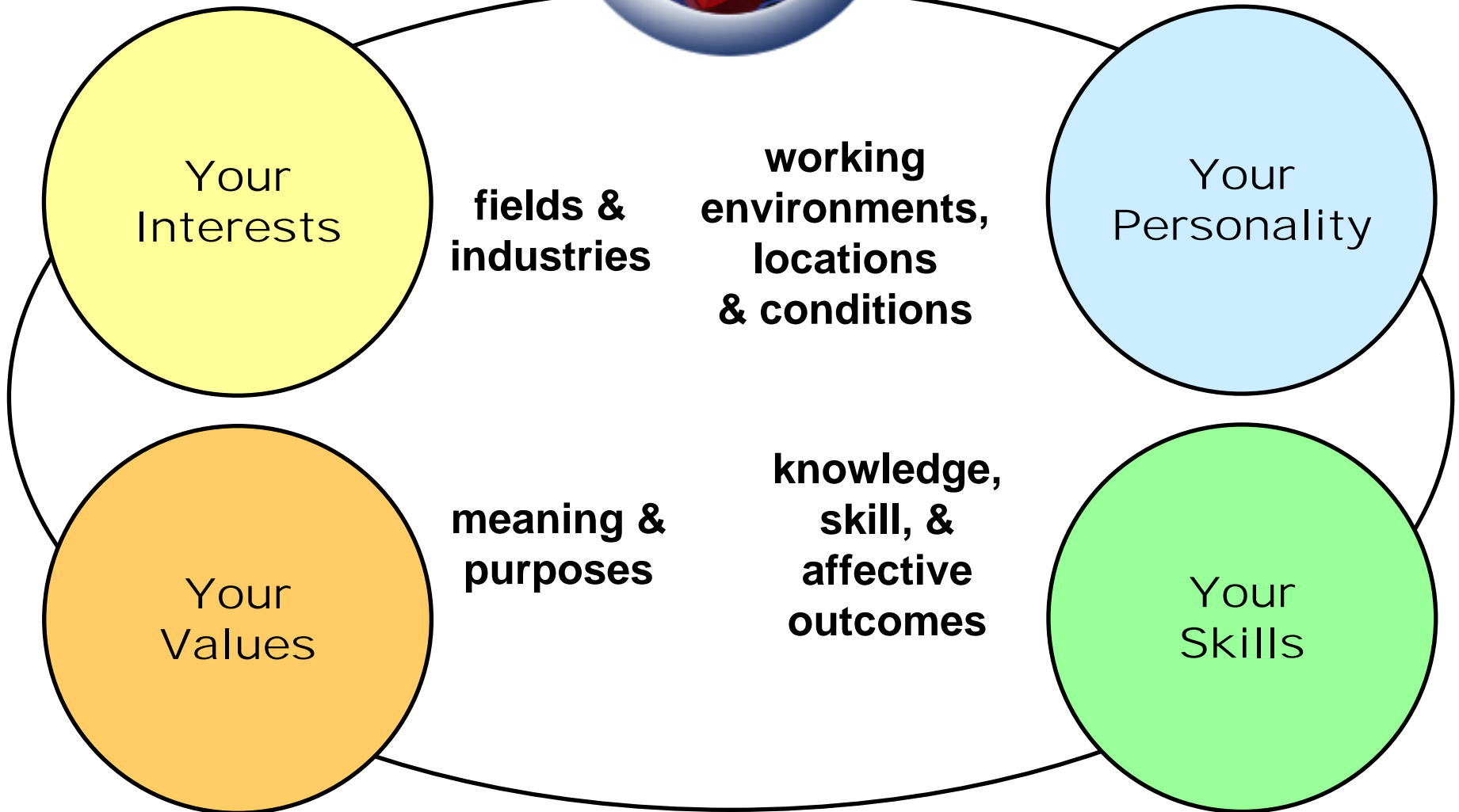
- University education
- Engineering education
- Myers-Briggs Type Indicator (MBTI)
- Time Management
- Effective learning
- Teamwork
- Communication
- Presentation skills
- Conflict resolution
- Personal and professional development

Course outcomes of CENG002

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- Identify your strengths and weaknesses in terms of knowledge, skills, and competencies.
- Formulate a plan of what you would like to do after graduation and identify the necessary resources to execute this plan.
- Produce a professional résumé.
- Know the essential elements of a successful job interview and prepare for one accordingly.
- Apply the concept of continuous improvement in managing your career and in **pursuing lifelong learning**.

Towards a better self-understanding





Towards self-regulation

- Myers-Briggs Type Indicator (MBTI)
- Self-reflective exercises



What is MBTI?

- MBTI
 - stands for Myers-Briggs Type Indicator
 - was developed by Katherine C. Briggs and Isabel Briggs Myers
 - is based on Carl G. Jung's personality type theory
 - is a personality assessment and looks at **normal** behavior only

The Four Dichotomies of MBTI

A globe showing a cityscape at night, with a red ribbon or ribbon-like shape draped over it, symbolizing the MBTI model.

- Where do you prefer to focus your attention?
Where do you get your energy from?
 - *Extraversion (E) vs Introversion (I)*
- How do you prefer to take in information?
 - *Sensing (S) vs Intuition (N)*
- How do you make decisions?
 - *Thinking (T) vs Feeling (F)*
- How do you deal with the outer world?
 - *Judging (J) vs Perceiving (P)*

Combining your preferences on each of the dichotomies...



E *or* **I**

S *or* **N**

T *or* **F**

J *or* **P**

The 16 MBTI Personality Types

	S	S	N	N	
I	ISTJ	ISFJ	INFJ	INTJ	J
I	ISTP	ISFP	INFP	INTP	J
E	ESTP	ESFP	ENFP	ENTP	P
E	ESTJ	ESFJ	ENFJ	ENTJ	P
	T	F	F	T	

Assessment and verification of MBTI



- Students were asked to complete an on-line assessment.
- They were then required to attend a debriefing session, during which they identified their “self-estimated” type.
- Any difference between the on-line type and self-estimated type was resolved with a verification procedure.

What are the applications of MBTI?



- Self-understanding and development
- Learning
- Career development and exploration
- Organization development
- Team building
- Management and leadership training
- Problem solving
- Relationship counseling
- Academic counseling
- Diversity and multicultural training

Examples of reflective exercises

*“Experience plus
reflection equals
learning.”*

--- John Dewey





Exercise

- Write down
 1. the main reason why you chose to study engineering, and
 2. the thing that you want to learn the most as an engineering student.
- Discuss your answers with your neighbor for 2 minutes and be prepared to share with the class.



Exercise

- What is the one thing that you find most interesting in our discussion of engineering education?
- What is the one question that you wish to ask?
- Write down your answers and discuss with your neighbor for 2 minutes. Be prepared to share with the class.



Exercise

- Based on a realization of your strengths and weaknesses in terms of your learning style, identify an area of learning that you would most wish to improve and formulate a plan for action. Think on your own first, write your plan down, then discuss with your neighbor for a few minutes. Be prepared to share with the class.



Exercise

- Based on our discussion today
 1. Think of a bad communication experience you had. Identify the main reason for that bad experience.
 2. Identify an area of strength that you have as a communicator.
 3. Identify an area for improvement so that you can contribute to a team more effectively.
- Write your answers down and discuss with your neighbor for a few minutes. Be prepared to share with the class.

Monthly reflective statements



- Things that I have done well this month
- Things that I could have done better this month
- The most difficult challenge I faced this month
- The most valuable thing I learned this month
- My main goals for next month
- Activities needed to achieve my goals
- Resources needed to achieve my goals
- Evidence and measure of success
- A brief reflective statement of what you have learned from completing this form

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Student feedback: reflections

- *“Usually I do not sit down and think about how I am coping with life as an undergraduate. I think this exercise helps me do so.”*
- *“Always think about what we have done, if it can be improved and set goals for the coming days.”*
- *“I have learned ‘action’ should be done once you have made a decision. Just ‘thinking’ of what you are going to do is not enough.”*

Student feedback: courses

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- *“I am able to understand myself more as there are some exercises to guide me to think. I believe it is good for my studies as well as for my future career to understand myself more.”*
- *“I think the course materials are very suitable for students’ needs, not only for university students but also high school students.”*

Building learning communities

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- **CENG001**
 - Integration with the Department's mentoring program
 - Sharing between first-year and senior students
- **CNEG002**
 - Enriching the course site as a resource for all students
 - <http://lmes2.ust.hk>



Summary

- Skill and affective outcomes can be explicitly taught in an engineering curriculum.
- The conceptual framework and approach are transferable to other academic disciplines.