

Based on the missions of HCMUTE and FME, the MMT programme was developed in 2011 and applied in 2012 with the purposes of training high quality human resources for the economic-social development of the country and the region and orienting to international integration.

The objectives of MMT programme are to prepare students to:

1. Apply general knowledge and professional knowledge to work effectively and implement lifelong learning in the mechanical manufacturing field.
2. Execute critical thinking, problem solving skills and professional skills.
3. Communicate effectively in the professional environment, leadership and team work situations. Be aware of social responsibility and ethical behaviour
4. Conceive, design, implement and operate effectively mechanical manufacturing systems.

The programme objectives totally meet Vietnam Education Law in which the goal of education is to train human comprehensive development, ethics, knowledge, health, aesthetic and professional, loyal to the ideals of national independence and socialism; form and nurture the personality, qualities and competencies of citizens, meeting the requirements of the cause of building and defending the country.

Expected learning outcomes of the programme:

After successful completion of the programme, students will be able to:

- ELO 1: Use general knowledge of mathematics and science to learn professional knowledge and pursue higher education.
- ELO 2: Apply the fundamentals of mechanical engineering knowledge.
- ELO 3: Analyze and solve manufacturing engineering problems.
- ELO 4: Measure and interpret experimental data related to mechanical engineering in term of professional skills.
- ELO 5: Lead and work effectively in individual and group-oriented settings.
- ELO 6: Communicate effectively in different forms, such as written, multimedia, graphical, and presentation.
- ELO 7: Demonstrate the ability to use English in mechanical engineering, emphasizing on reading and writing skills.
- ELO 8: Exhibit lifelong learning capacity.
- ELO 9: Appreciate different enterprise cultures, demonstrate professional behaviors and work successfully in industrial organizations.
- ELO 10: Conceive, plan and manage the projects in accordance to the industrial requirements.
- ELO 11: Design technological equipment and processes.

- ELO 12: Implement the production, assembly and quality assurance of mechanical products.
- ELO 13: Operate and maintain the production systems.

Expected learning outcomes grouped by knowledge, skills, attitudes and life-long learning skill

Knowledge and Skills		Expected learning outcomes
Generic Knowledge	– Mathematics, science	ELO 1
Specific Knowledge	– Understandings and knowledge of mechanical engineering	ELO 2, 3, 10, 11, 12, 13
Generic Skills	– Reasoning, Critical thinking, team work, self-regulating, problem solving, self-learning – Communication, sense of engineering analysis, synthetic approach	ELO 5, 6
Specific Skills	– The use of common Lab instruments in mechanical engineering – Engineering system design and data analysis and assessment	ELO 4, 10, 11, 12, 13
Attitudes	– Social ethical and responsibility. – Professional and ethical responsibility	ELO 9
Life-long learning	– Scientific knowledge and skill for life-long learning	ELO 1, 7
	– Perception of life-long learning	ELO 8

The ELOs mentioning on attitude, cultures and behavior are transferred to students within seminars, practices in factories and other union activities such as the Green Summer Volunteer Campaign, blood donation, charitable activities, etc

Matrix of Extracurriculum activities vs. Expected learning outcomes

No	Activities	ELOs/Contribution level												
		ELO 01	ELO 02	ELO 03	ELO 04	ELO 05	ELO 06	ELO 07	ELO 08	ELO 09	ELO 10	ELO 11	ELO 12	ELO 13
1	National Entrance Exam Supports	N	N	N	N	W	N	N	W	N	N	N	N	N
2	Green Summer Volunteer	N	N	N	N	W	W	N	W	N	N	N	N	N

No	Activities	ELOs/Contribution level												
		ELO 01	ELO 02	ELO 03	ELO 04	ELO 05	ELO 06	ELO 07	ELO 08	ELO 09	ELO 10	ELO 11	ELO 12	ELO 13
	Campaign													
3	Environmental hygiene	N	N	N	N	W	W	N	W	N	N	N	N	N
4	Field trips	N	N	N	N	W	W	W	W	S	N	N	N	N
5	Social Union Activities	N	N	N	N	S	W	N	W	N	N	N	N	N
6	English club	N	N	N	N	S	S	H	S	N	N	N	N	N
7	Soft skills clubs	N	N	N	N	H	S	N	H	H	N	N	N	N

Note: H - Highly Supportive; S - Supportive; W - Weakly Supportive; N: Non-Supportive