1. Title	Design chiller plant machine room
2. Code	EMACDE503A
3. Range	Apply highly specialized technical research and scholastic skills, and make complex information analysis, planning and judgement, so as to carry out tasks of designing chiller plant machine rooms at design studios.
4. Level	5
5. Credit	9
6. Competency	Performance Requirements 6.1 knowledge of chiller plant machine room design ♦ Understand the principles and general requirements for chiller plant machine room design and layout 6.2 Methods and procedures of designing chiller plant machine room ♦ Choose the location of chiller plant machine room, including: • Calculating the capacity of refrigeration equipment • Deciding the type of refrigerant • Deciding the type of refrigeration system（direct cooling type or indirect cooling type） • Deciding the number of chiller plants • Choose suitable location of the chiller plant machine room according to the limitation of the building environment, the operating requirements and the impact on environment ♦ Design the system layout for the chiller plant machine room according to the requirements on operation and repair, saving of pipeline and the impact on environment 6.3 Professionalism in designing chiller plant machine room ♦ Perform tasks of designing chiller plant machine rooms according to legal requirements and codes of practice
7. Assessment Criteria	The integrated outcome requirement of this unit of competency is: (i) Capable to apply highly specialized technical research and scholastic skills, and make complex information analysis, planning, design and judgement, so as to complete tasks of designing chiller plant machine rooms.
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses general knowledge of air-conditioning and refrigeration systems.