

Specification of Competency Standards
for the Elderly Care Service Industry
Unit of Competency

Functional Area - Clinical Care

Title	Design Rehabilitation Devices
Code	106111L5
Range	This Unit of Competency is applicable to employees in the elderly care service industry who provide rehabilitation services to elderlies. This Competency involves creativity and ability to make judgment. Employees are required to assess and analyse elderlies' ability and day-to-day needs, and design appropriate rehabilitation devices for them, according to elderlies' and their carers' living condition, so as to enhance their independence and reduce the burden of the carers.
Level	5
Credit	9 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Relevant knowledge on rehabilitation devices</p> <p>Be able to</p> <ul style="list-style-type: none"> • Understand the definition, concepts and principles of rehabilitation • Understand the definition of 'Occupation', including <ul style="list-style-type: none"> ○ Activities of daily living (ADLs) ○ Work ○ Leisure • Understand the aims of using rehabilitation devices, such as: <ul style="list-style-type: none"> ○ Improve elderlies' functional abilities, so that they can live with less assistance from others ○ Reduce the effort required to perform tasks, making them less tiring ○ Provide appropriate stability ○ Improve environment • Understand the types of rehabilitation devices, such as: <ul style="list-style-type: none"> ○ Daily living tools, such as cutlery and dressing assistance devices ○ Mobility aids, such as walking aids and wheelchair ○ Leisure tools, such as playing cards holder, and Boccia ball ramp device • Understand the elements that need to be assessed before designing rehabilitation devices, such as: <ul style="list-style-type: none"> ○ Ability of elderlies, such as muscle strength, level of mobility, and self-care ability in daily life ○ Environmental factors, such as architectural limitation, whether elderlies are living with family, and facilities at home ○ Other factors, such as ability of carers, educational background, elderlies' interest and leisure activities • Understand the factors to consider when designing rehabilitation equipment, such as: <ul style="list-style-type: none"> ○ Structure of the device ○ Accessibility and adaptability ○ Comfort and endurance ○ Make use of elderlies' current ability effectively ○ Easy to be mastered by users ○ Preferences of elderlies or their carers • Understand human anatomy and mechanics, such as: <ul style="list-style-type: none"> ○ Anatomy and physiology of musculoskeletal and neurological systems ○ Mechanics and biomechanics ○ Ergonomics etc. • Understand methods and skills to design rehabilitation devices, such as:

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	<ul style="list-style-type: none"> ○ create design drawings ○ Choose appropriate materials <p>2. Design rehabilitation devices</p> <p>Be able to</p> <ul style="list-style-type: none"> ● Assess elderlies' level of mobility and self-care ability; collect relevant information ● Analyse factors leading to mobility difficulties or causing obstacles to elderlies' daily life, such as: <ul style="list-style-type: none"> ○ Neuromuscular control ○ Inadequate range of motion of joints ○ Environmental limitations hindering activities ● Focus on the factors that lead to mobility difficulty or causing obstacles in daily life, integrate all relevant information; design rehabilitation devices that address the needs of individual elderlies ● Demonstrate to elderlies and their carers how the rehabilitation devices are used and provide training to them ● Monitor how well elderlies use of rehabilitation devices; provide assistance and guidance accordingly ● Collect feedback on rehabilitation devices from elderlies and their carers, by means of such as: <ul style="list-style-type: none"> ○ Interviews ○ Questionnaires ● Review the use of rehabilitation devices regularly, make proper adjustment, provide repair and maintenance, according to: <ul style="list-style-type: none"> ○ Elderlies' improvement in functional abilities ○ Changes in environment that affect the performance of rehabilitation devices. <p>3. Exhibit professionalism</p> <p>Be able to</p> <ul style="list-style-type: none"> ● Ensure the designs of rehabilitation devices match elderlies' needs in daily life to let them apply their best abilities ● Design rehabilitation devices using professional knowledge and skills
Assessment Criteria	<p>The integrated outcome requirements of this Unit of Competency are:</p> <ul style="list-style-type: none"> ● Ability to design appropriate rehabilitation devices for elderlies based on assessment information, after considering the factors essential to the design of rehabilitation devices; ● Ability to teach elderlies and their carers to use rehabilitation devices properly by providing demonstration and training; and ● Ability to collect comments on rehabilitation devices from elderlies and their carers, and make proper adjustment to the devices according to elderlies' condition and other factors.
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