

## Subject Description Form

<b>Subject Code</b>	BME31206
<b>Subject Title</b>	<b>Biomedical Engineering Clinical Attachment I</b>
<b>Credit Value</b>	4 Training Credits
<b>Level</b>	3
<b>Prerequisite</b>	BME11108 Biomedical Engineering in Society
<b>Objectives</b>	<p>To provide opportunities for students to integrate the theoretical and practical aspects of clinical application of BME – Prosthetics and Orthotics. Practical working experience in prosthetics and orthotics in the clinical setting will ensure the student can function as an effective entry-level member of staff, and so high professional standards and management abilities are aimed at. The use of initiative, creative thinking, problem-solving techniques are encouraged and self-evaluation and the development of self-confidence are emphasized.</p>
<b>Intended Learning Outcomes</b>	<p>Five categories of professional training are emphasized: Professional Competency (PC); Professional Development (PD); Inter-Personal Relationship (IR); Communication Skill (CS); and Organization and Management (OM).</p> <p>On successful completion of this course, students should be able to:</p> <ol style="list-style-type: none"><li>a. Perform in the real working environment of the prosthetics and orthotics discipline in clinical settings (PC &amp; PD);</li><li>b. Perform confidently in patient management (OM);</li><li>c. Work effectively and companionably within the working team (PC, PD, IR &amp; CS);</li><li>d. Communicate effectively in the professional context with patients (IR &amp; CS);</li><li>e. Present and interpret accurately, comprehensively, and concisely all matters pertaining to the patient management and in all other way communicate effectively with other professionals in the healthcare team (PC &amp; CS);</li><li>f. Liaise and recommend, based on the concept of a multidisciplinary approach, referrals of patients to and from other healthcare personnel (IR &amp; CS);</li><li>g. Document, compile, and interpret relevant information on patients or the</li></ol>

	<p>clinical scenario (PC, PD &amp; OM);</p> <ul style="list-style-type: none"> <li>h. Integrate theoretical knowledge and assessment findings to identify short- and long-term approach to solve clinical problems (PD &amp; OM);</li> <li>i. Plan, prioritize, and implement management programmes with the maximum degree of safety, effectiveness, and efficiency (PC, PD &amp; OM);</li> <li>j. Execute competently the organization of time and space within professional practice (PC, PD &amp; OM);</li> <li>k. Implement the principles of investigative methods in the working environment (PC &amp; PD);</li> <li>l. Work according to the ethics of the profession (PC &amp; PD).</li> </ul>
<p><b>Contribution to Programme Outcomes (Refer to Part I Section 10)</b></p>	<ul style="list-style-type: none"> <li>▪ Programme Outcome 1: Demonstrate an ability to apply knowledge of mathematics, science, and engineering appropriate to the Biomedical Engineering (BME) discipline. (Practice)</li> <li>▪ Programme Outcome 2: Demonstrate an ability to design and conduct BME experiments, as well as to analyze and interpret data. (Practice)</li> <li>▪ Programme Outcome 3: Demonstrate an ability to design a system, component, or process relevant to BME to meet desired needs within realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability. (Practice)</li> <li>▪ Programme Outcome 4: Demonstrate an ability to identify, formulate, and solve BME problems. (Practice)</li> <li>▪ Programme Outcome 5: Demonstrate an ability to understand the impact of BME solutions in a global and societal context, especially the importance of health, safety and environmental considerations to both workers and the general public. (Practice)</li> <li>▪ Programme Outcome 7: Demonstrate an ability to use the techniques, skills, and modern engineering tools necessary for BME practice. (Practice)</li> <li>▪ Programme Outcome 9: Demonstrate an ability to function in multi-disciplinary teams. (Practice)</li> <li>▪ Programme Outcome 10: Demonstrate an understanding of professional and ethical responsibility. (Practice)</li> <li>▪ Programme Outcome 11: Demonstrate an ability to communicate effectively and advise clients, professional colleagues, and other members of the community. (Practice)</li> <li>▪ Programme Outcome 12: Demonstrate an ability to recognize the need for, and to engage in life-long learning. (Practice)</li> <li>▪ Programme Outcome 13: Demonstrate an understanding of contemporary issues. (Practice)</li> </ul>

<b>Subject Synopsis/ Indicative Syllabus</b>	The importance of continuing education and applying investigative methods within later professional development is reinforced. The prosthetics or orthotics clinical training will focus on the student's ability in applying academic knowledge to solve assigned work tasks; learning new professional tools and techniques; following professional and ethical responsibilities; effectiveness in verbal and written communication as well as participations in team working. Questions and immediate feedback of the student–mentor interaction is an important part of the learning/teaching.													
<b>Teaching and Learning Methodology</b>	Working experience in Prosthetics or Orthotics setting and presentation. The students will be supervised by the Clinical Educator and Clinical Mentors.													
<b>Assessment Methods in Alignment with Intended Learning Outcomes</b>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)											
			a	b	c	d	e	f	g	h	i	j	k	l
	Student–mentor interactions	70%	√	√	√	√	√	√	√	√	√	√	√	√
	Reports	15%	√	√	√	√	√	√	√	√	√	√	√	√
	Presentations	15%	√	√	√	√	√	√	√	√	√	√	√	√
	Total	100%												
<i>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</i>														
Student performance will be assessed based on the 5 categories of professional training mentioned above.														
<b>Student Study Effort Expected</b>	Class contact:													
	▪ Working in prosthetics or orthotics clinical setting												280 Hrs.	
	▪ Presentation												2 Hrs.	
	Other student study effort:													
	▪ Report preparation												3 Hrs.	
	Total student study effort												285 Hrs.	

<b>Reading List and References</b>	BME Clinical Attachment Handbook, Interdisciplinary Division of Biomedical Engineering, The Hong Kong Polytechnic University
<b>Date of Last Major Revision</b>	14 July 2014
<b>Date of Last Minor Revision</b>	