



Degree Level Bachelor's Grad.Dip. Master's Higher Grad.Dip. Doctoral Faculty of Medicine Siriraj Hospital

TQF2 Bachelor of Science Program in Prosthetics and Orthotics (Blended distance learning international program)

Revised Program of academic year 2020

Mahidol University Degree Profile

(MU Degree Profile)

Bachelor of Science Program in Prosthetics and Orthotics

(Blended distance learning international program)

| Bachelor's Degree Program | |
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| 1. Name of the program | |
| (Thai) | หลักสูตรวิทยาศาสตรบัณฑิต สาขาวิชากายอุปกรณ์ (หลักสูตรนานาชาติแบบเรียนทางไกลผสมผสาน) |
| (English) | Bachelor of Science Program in Prosthetics and Orthotics (Blended distance learning international program) |
| 2. Degree Name | |
| (Thai) | วิทยาศาสตรบัณฑิต (กายอุปกรณ์) |
| (English) | Bachelor of Science (Prosthetics and Orthotics) |
| General information of the program | |
| Type of the program | Bachelor's Degree (Professional) |
| Required number of credits | 154 credits |
| Studying duration / program round | 4 years |
| The program's status and opening schedule | Bachelor's Degree Scheduled to open for semester 2, academic year 2020 |
| Degree granting | One degree |
| Degree-granting Institutions (MOU with other institutions) | Mahidol University |
| Organizations certifying the standard | International Society for Prosthetics and Orthotics (2019-2023) |
| Specific information of the program | |



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| Purpose / Goals / Objectives | <p>Goals: To produce graduates with prosthetic and orthotic knowledge exhibiting desirable characteristics of graduates of Mahidol University and to satisfy the standards of the International Society for Prosthetics and Orthotics</p> <p>Objectives</p> <ol style="list-style-type: none">1. To produce graduates with the knowledge of principles and rules related to the science, methods of producing prosthetic and orthotic appliances, including other skills and whom are able to apply program all knowledge in future clinical practice2.To produce graduates with knowledge and skills that are in accordance with current professional ethics and whom will engender a good ethical clinical practice, whilst respecting and protecting the rights of others3.To produce graduates with robust interpersonal skills for effective team-based work in multidisciplinary teams4.To produce graduates who are equipped with self-development skills and a desire to pursue additional knowledge related to prosthetics and orthotics5.To produce graduates who can apply knowledge gained to conduct research which relates to prosthetic and orthotic science, with correct methodology and which is suitable for their specific research question6.To produce graduates who are equipped with lifelong learning skills, a sense of duty, social responsibility, and whom will apply this knowledge for the benefit of society |
| Distinctive Features | <p>This program has been certified by the International Society for Prosthetics and Orthotics. Focus is on producing graduates who are ready to do the clinical work immediately by using advanced instruction method and tools of the blended learning method of education (BDLE). The program tailored combination of the distance learning (web-based) delivery of the academic content including theoretical lectures, seminars, research topics and case studies and the comprehensive practical education through on- site</p> |



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| | demonstration workshop seminar with hands-on experience and real patient. The students are encouraged to develop self-study skills, use creativity and systematic analysis, learn and conduct the research. The individual student progression is closely monitored. |
| Educational system | Binary system according to tertiary education curriculum standards |
| Graduates' advancement | |
| Obtainable jobs | Prosthetist/ Orthotist in hospitals or workshop facilities. Being an academic staff or researcher in prosthetics/orthotics in educational institutions or other related organizations. |
| Further fields of study | Able to study in related fields such as orthotics, prosthetics, pedorthics, biomedical engineering, medical science, material sciences, public health science, health sciences education, health research and management, psychology, epidemiology |
| Philosophy in program administration | |
| Educational philosophy | The Sirindhorn School of Prosthetics and Orthotics believes that students can be transformed into globally competent graduates if given appropriate opportunities directing toward student achievement, supported by a learner-centred and constructivism approach to teaching. |
| Strategy / teaching guidelines | With the combination of the distance and on-site learning, the program provides a variety of learning experiences, use appropriate media and information technology to promote self-learning for students integrating theory and practice, giving importance to the use of evidence and professional practice in real-life situations. There is a system for monitoring, follow up, and helping students. Organize additional activities and attach importance to the cultivation of morals and ethics throughout the curriculum. |



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| <p>Strategy / student's evaluation guidelines</p> | <p>Student Learning Assessment:</p> <ol style="list-style-type: none"> 1. Formative assessment by focusing on training students self-assessment and reflection. 2. Summative assessment by using criteria-based decisions emphasizing effective outcomes by continually evaluating student achievement based on Learning Outcomes as Course Learning Outcomes (CLOs) and Program Learning Outcomes (PLOs) |
| <p>Competences provided to the students</p> | |
| <p>Generic Competences</p> | <ol style="list-style-type: none"> 1. Critical thinking: Able to analyze and reach systematic synthesis, analyze problems with cause and effect, think creatively under the guidance of the teacher. 2. Self-directed learning: Able to analyze the knowledge and skills that they need, set a learning goal, seek learning resources, choose learning methods, and assess the progress of self-learning. 3. The use of information technology: Able to search, store, and manage information and knowledge appropriately for effective learning. 4. Communication skills: Able to communicate with others, both by listening, speaking, reading and writing, suitable for the group and purpose of communication. 5. Administrative skills: Able to apply process management concepts in the operations under the supervision of instructors. 6. Research skills: Able to search for facts, understand and be able to assess new information, concepts and evidence from a variety of sources and use the information to solve problems and other tasks. 7. Life skills: Demonstrate life skills and continuously improve oneself. 8. Morality, Ethics and Good Citizenship: Show responsibility at work and be responsible for their actions with morality and ethics. |



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| <p>Subject-specific Competences</p> | <p>Knowledge:</p> <ul style="list-style-type: none"> - Basic knowledge in medical science, including anatomy, pathology, physiology, rehabilitation medicine, psychology - Basic knowledge in engineering, including mechanics, biomechanics, materials science, engineering drawing - Prosthetics and Orthotics knowledge such as the production of prosthetic/orthotic device at every level according to international standards <p>Application:</p> <ul style="list-style-type: none"> - Apply knowledge in related sciences to treat the patient by using prosthesis and orthosis. - Have skills in patient assessment, treatment plan, prosthetic/orthotics design, selection of suitable materials, fabrication, modification of orthoses and prostheses at all levels. Evaluation of treatment, as well as the use of medical shoes to look after and treat people with physical disorders. <p>Professionalism:</p> <ul style="list-style-type: none"> - Able to classify reasons, make decisions and take actions related to professional ethics |
| <p>Graduates' learning outcome: At the end of the program, successful students will be able to:</p> | |
| <p>PLO 1</p> | <p>Apply knowledge of medical sciences, engineering, prosthetic and orthotic sciences to professional practice taking on account each patient and their needs and circumstances</p> |
| <p>PLO 2</p> | <p>Demonstrate proficiency in conducting an appropriate examination, evaluation, and assessment of users across the individuals' lifespan</p> |
| <p>PLO 3</p> | <p>Demonstrate competence in plan and following the individual prosthetic/orthotic service plans to achieve the standard of International Society for Prosthetics and Orthotics (ISPO standard)</p> |
| <p>PLO 4</p> | <p>Optimise the use of appropriate equipment, materials, components and techniques in prosthetic/orthotic services</p> |
| <p>PLO 5</p> | <p>Demonstrate the appropriate attitude and accuracy in providing understanding and useful information necessary for users and all related persons</p> |



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| PLO 6 | Demonstrate social and professional responsibility, and ethical behaviour with virtue and respecting the Professional Code of Ethics |
| PLO 7 | Participate in the development and implementation of practice management skills in various settings |
| PLO 8 | Work effectively in an inter/intra-professional collaborative setting |
| PLO 9 | Demonstrate proficiency in communication skills, appropriate to the target group, using different means |
| PLO 10 | Conduct research related to Prosthetics and Orthotics |
| PLO 11 | Demonstrate self-evaluation skills and self-reflection in an appropriate manner, incorporating them to different tasks and situations |