International Recommendations on Education in Biomedical and Health Informatics – An Overview

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Abstract

The educational recommendations aim is to provide a tool for academic program evaluators to compare and accredit the quality of delivered programs; support educators in developing BMHI (Biomedical and Health Informatics) curricula at various educational levels; identify essential skills and competencies for healthcare professionals and those working in the field of BMHI certification; and encourage institutions, organizations, and health authorities to recognize the need for establishing and further developing BMHI educational programs.

A brief presentation outlining the most recent updated version of the recommendations—which are offered for courses and course tracks in BMHI as part of educational programs in biomedical and health sciences, health information management, and informatics/computer science, as well as for dedicated programs in BMHI (leading to bachelor's, master's, or doctoral degrees)—follows a brief history of the IMIA Educational activities and its support in developing the recommendations.

The six domain areas of BMHI fundamental principles, health sciences and services, computer, data, and information sciences, social and behavioral sciences, management science, and BMHI specialization are used to characterize the educational requirements for the roles of BMHI user, BMHI generalist, and BMHI specialist. Additionally, suggestions are made for doctorate, master's, and bachelor's degree-level BMHI-focused educational programs. These are the BMHI's main academic offerings.

Furthermore, suggestions for protocols related to certification, accreditation, and continuing education are given. The IMIA recommendations center on the educational needs for the healthcare workforce, computer scientists, and decision makers to acquire BMHI knowledge and skills at various levels. These recommendations reflect societal changes related to globalization, digitalization, and digital transformation in general and in healthcare specifically. Finally, a brief explanation of the accrediting quality control procedure will be provided.

Keywords: Biomedical informatics; Education; Health informatics; Medical informatics; Recommendations; Training