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EDITORIAL

BIOMEDICAL DEGREE IN PAKISTAN: AN INSIGHT

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Among all the multidisciplinary fields, biomedical is the fastest growing. Its diversified skills in biological as well as engineering sciences makes it a unique pillar of the any healthcare unit to create unique solutions while pertaining to healthcare standards. However, in Pakistan, the importance of biomedical field was recognized later.[1] Here are several causes for this. First, we mix biomedical degree with pure medical science, and second, all relevant vacancies in Pakistan are filled by electronics and electrical engineers. It would be difficult to underline the importance of biomedical graduates in Pakistan without defining their employment positions and duties. Many companies who are working with biomedical equipment, in particular, have begun to provide special vacancies and quotas for biomedical graduates to emphasize the importance of biomedical field and to give it equal merit like all other fields.

Many HEIs have started offering bachelors program in the biomedical field. Currently, the bachelor degree in Biomedical Engineering is offered by the University of Engineering & Technology, Lahore (KCK Campus), Riphah University, Lahore, Sir Syed University of Engineering & Technology, Karachi, Hamdard University, Karachi, NED University of Engineering and Technology, Karachi, Ziauddin University, Karachi, Salim Habib University, Karachi, Liaquat University of Medical and Health Sciences, Jamshoro, and Mehran University of Engineering and Technology, Jamshoro.[2]

Bachelor degrees in biomedical technology is offered by The University of Lahore, Lahore, University of Engineering & Technology, Lahore (KSK Campus), Foundation University, Rawalpindi Campus, Islamia University of Bahawalpur, Bahawalpur, NFC Institute of Engineering & Technology, Multan, Superior University, Lahore, Ziauddin University, Karachi, University of Engineering and Technology, Taxila, Punjab Tianjin University of Engineering & Technology, Lahore, and National University of Technology, Islamabad.[3]

Defining the role of biomedical personnel in healthcare enables them to serve for hospitals, firms working with equipment as well as in research and development and regulatory agencies. Biomedical personnel have a broad spectrum for their career prospect, and they have greater opportunities to pursue postgraduate studies in different countries around the globe. Their importance cannot be denied since they are a crucial pillar in healthcare in times of need, such as in times of COVID-19 when society as a whole went in recession and fell under the need for more biomedical personnel.

The difference between biomedical engineering and biomedical technology is always a source of debate for students and parents. A student who graduates in biomedical engineering will receive a Pakistan Engineering Council (PEC) registration number, whereas a biomedical technologist will receive a National Technology Council (NTC) registration number.[2,3] Both PEC and the NTC are accreditation bodies in Pakistan that seek to ensure the quality of education and make it comparable to worldwide educational standards in higher education institutions.

KEY WORDS: Biomedical Engineering, Biomedical Technology; Healthcare; Hospitals; Pakistan.

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NTC is a recently recognized accreditation body committed to engineering technologist programs in Pakistan, as designated by the HEC. It was created to enhance Pakistan's technological sector, while PEC is only for engineers. Many people including biomedical companies are unfamiliar with NTC; they repeatedly inquire about the PEC registration number during interviews, implying that PEC is more valuable than NTC since they are unaware of NTC. It is critical to raise awareness among them that technologists are subject to the NTC and that

they should be questioned about it. It is critical to raise awareness among them that technologists are regulated by the NTC, and they should be asked for their NTC number rather than their PEC number. Clear and defined employment positions and roles must be developed for biomedical engineers and biomedical technologists separately.

Engineers with a PEC number are intended to concentrate on developing and designing medical solutions. Hence, they are taught 70% theoretical knowledge and 30% practical knowledge. Engineers are regarded as problem solvers. Technologists, on the other hand, are given more practical knowledge than academic information; so that they can work in the industry and deal with technical concerns with medical equipment and machines. We must recognize that, for the sake of our country's welfare and growth, engineers and technologists must collaborate.[2]

In contrast to other traditional degrees where there are few openings compared to the number of students graduating; the government should promote the biomedical degree in Pakistan by expanding jobs opportunities for graduates because this degree has a significant growth potential in Pakistan,

Promoting cutting-edge degrees like biomedical, it can also address the issue of unemployment because graduates will have a wide range of employment choices available to them. We commend the government's efforts to set quota in hospitals for biomedical graduates. However, trying to establish biomedical research facilities and industry would revolutionize the field of medicine in Pakistan and would also contribute to strengthen our economy.

To make sure that biomedical students acquire the necessary technical training and adhere to professional ethics that satisfy national and international standards, HEC should work with universities. Additionally, opportunities for Continual Professional Development (CPD) for students must be made available.

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All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.