

Ethics for Biomedical Engineers

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 Springer

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Preface

The need for engineering has moved from merely increasing productivity in the earlier days to almost all facets of life in the present world. The applications of technical knowledge and skills have also widened beyond the conventional engineering disciplines that can include the electrical, the electronic and the mechanical. Moreover, one needs to recognise that such applications often involve the marriage and/or selective adoption of principles from the aforementioned engineering disciplines. Presently, one good example would be the discipline of biomedical engineering. It is evident that biomedical engineering plays a vital role in the advances of both the medical sciences and the life sciences disciplines. Particularly, engineering principles are increasingly sought in areas such as enhancing the quality of life for patients and in the delivery of therapeutic treatments. With the proximity of biomedical engineering work to the human body, ethical practices of the biomedical engineering professionals in the workplace become just as important as those of other healthcare professionals including the medical doctors, the allied health and the nurses.

The once dogmatic belief that the study of ethics is of lesser relevance to the engineering professionals is soon becoming a dwindling past. With a number of high profile global incidents involving technological glitches, there is a growing sentiment that ethical topics need to be incorporated into engineering curriculum at the universities and colleges, as well as continual education programmes for existing engineering professionals. Likewise, this is applicable to the biomedical engineering discipline. In fact, it is more imperative for the biomedical engineering professionals to be better equipped with the understanding of acceptable practices and behaviours in their care for human lives, just as much as the other healthcare professionals. Broadly, the work involving a biomedical engineering profession can be revolved around a few major areas that include clinical engineering, medical instrumentation, implants and data mining. Therefore, it is essential for the biomedical engineering professionals and students to better appreciate the greater role

this profession plays in the workplace and the responsibilities that tagged with such a role. It is hoped that through this book, it provides the necessary materials to prepare and equip the biomedical engineering professionals and students for the aforementioned purposes.

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