

## **A new engineering education model for Malaysia**

### **ABSTRACT**

The role of Malaysian engineers in the development of industries, infrastructures and ensuring the general well-being of the country, cannot be underestimated. However, since engineers have been left out of top leadership positions, there is a perception that they have a marginal role in the country's progress. Lacking in the non-technical skills, which are necessary for top management or leadership positions, has been singled out as contributing to this dilemma. It is also cited that they have also yet to be active in research and development or to be involved in business on a global scale. A study on the engineering education models worldwide has shown that engineers need to have the interpersonal skills to deal with the public effectively as well as to be technically competent. There is a variation of emphasis and levels of technical competencies aimed in these models; stretching from a broad-based to specialised education. In facing the challenges of the future, it is envisaged that engineers must still possess the necessary technical competencies but should also be trained with a stronger emphasis in engineering science so that they are flexible enough to be involved in several engineering disciplines. To prepare engineers to be leaders in the development of a nation, they must be trained with various industrial skills such as communication, management, law, politics and environment. These engineers must also be trained in humanities, including ethics and professionalism, and be exposed to global scenarios and future trends. The engineering education model developed for Malaysia is expected to be capable of achieving global recognition and accreditation for excellence in engineering practice as well as educating future leaders. This includes strengthening the scientific and professional competency base of the engineering studies, and the inclusion of various humanistic, industrial, practical, global and strategic skills. The model envisages a four-year degree programme, as opposed to the current three years.

**Keyword:** Non-technical skills; Engineering; Education model; Malaysia