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THE ROLE OF ABSTRACT ALGEBRA CONCEPTS - RING AND MODULES THEORY IN ENGINEERING EDUCATION

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Abstract. Nowadays, engineering education incorporates many theories and innovative concepts by integrating basic courses into the engineering curriculum. It is observed that abstract concepts, algorithms, artificial intelligence and theorems are included in engineering courses, graduate and undergraduate projects, thanks to increasing contribution of information technology to engineering subjects. In this study, the concepts of abstract algebra and its sub-branches, especially ring and module theory in engineering curricula all over the Turkish universities are examined by giving comparative examples indicating both the number of courses and the ways of teaching methodologies. In addition, the awareness of students and academicians who are involved in engineering education to these concepts was also investigated by field researches and interviews. As a result, it can be said that this issue has not been adequately addressed in the engineering faculties in Turkey, but recent development and accreditation studies have contributed to increasing awareness to these concepts considerably.

References

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