

Converting Cumulative Grade Point Average to an Equivalent Percentage Value Based on Fuzzy Logic

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Abstract

The graduates who have finished their study program will be given a merit award and their award certificates will be graded in accordance with the degree of their academic accomplishment. The awards are generally offered using two methods; one is by the cumulative grade point average (CGPA) and the other is by the average percentage of all marks for the students. The problem is when assigning a course final grade; each student's final percentage is translated to a letter, allowing the discrepancy within the same letter grade range in the final ranking. If two students have the same final score, that means equal results. However, this equality can be false if one student hits a percentage of the highest grade, while the second student earns a percentage of the lowest grade of the same letter grade. This paper introduced a new equation that transforms between the awarded cumulative grade point average and the awarded percentage ranking based on fuzzy system. The proposed approach was tested using three actual benchmarks collected from three different colleges in Beni-Suef university. The obtained results reflects the effect of the fuzzy logic in helping converting form CGPA measures to percentage measure in educational systems.

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