

## Mapping of grades for exchange students

(Approved in 233<sup>rd</sup> meeting of the Senate held on 25/04/2018).

IITB uses letter grades on a 4-10 scale. The following proposal outlines a scheme to map grades from other numeric or letter grades to the IITB scale.

Mapping from a numeric range:

Suppose a University provides a numeric range  $[L, H]$  where  $L$  is the lowest passing mark and  $H$  is the highest passing mark. Compute constants  $a$  and  $b$  such that  $aL+b = 4$  and  $aH + b = 10$ . That is  $a = 6/(H-L)$ . And  $b = (4H-10L)/(H-L)$ . For any numeric score  $x$ , the numeric grade in the IITB system is computed as  $\text{floor}\{ax+b\}$ .

Comparison with the earlier UGPC ruling:

The earlier UGPC document only gives a formula for the ranges  $[1,4]$  and  $[1,5]$ . For the  $[1,5]$  scale, this proposal coincides with the earlier ruling. However for the  $[1,4]$  scale the earlier UGPC ruling proposed  $\text{floor}\{ax+b+0.5\}$ . Note that even in this case, the result is the same for integral and half-integral values of  $x$ , like 1, 1.5, 2, 2.5 etc.

Mapping for letter grades.

If the University does not provide a numeric grade and only provides letter grades then the following map be considered. We first map letter grades as given below to a numeric range and then use this numeric range to compute the grades. The lowest letter grade is mapped to the number 1. The next is mapped to 1.5. Every letter grade is mapped to 0.5 plus the number mapped by the previous letter grade. Note that if the University provides both letter grades and numeric equivalents, the numeric equivalent will be used.

Fail grades are mapped to zero.

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