#### **BEYKENT UNIVERSITY**

#### **RELATIVE EVALUATION SYSTEM APPLICATION DIRECTIVE**

(Senate Decision No. 2022/17 of 30.06.2022)

Article 1 - The relative assessment system is a system to evaluate a student's success compared to the success levels of other students in the class. The main purpose of using this method is to grade students in a certain course based on their performance in the group taking the same course, not according to the absolute grades they get out of 100 points. The term "performance" stands for the student's standing in relation to the average success in a class. *Statistical methods* are used to determine how much a student is above or below the class average. The *standard deviation* of the grades in the relevant class is used in determining the *distance* of the student *from the average*.

Article 2 - Absentees are not included in calculations, and graded as "NA". The student's course grade is calculated at the end of the term (or at the end of the year for one-year courses) using the absolute evaluation method and the formula below by taking into account the midterm (midyear) and final grades, and it is referred to as the "**raw final grade (RFG)**".

## Raw Final Grade (RFG) = Midterm (mid-year) grade x midterm (mid-year) participation percentage/100 + Final (end-of-year) Grade x final grade participation percentage/100.

The student's in-term grade is determined according to the grades obtained from at least three assessment activities such as quizzes, labs, seminars, assignments, portfolios, projects, and reports, at least one of which is a midterm exam, and to the weight of the relevant assessment activity.

The participation percentage of the in-term (in-year) grade in the final grade cannot be less than 0.30, and not more than 0.70. Internship, internship I, Internship II, and academic orientation courses, for which the Relative Evaluation System is not applicable, are not included in the Relative Evaluation System.

Article 3 - The arithmetic average of RFGs of students, excluding absentees, is called the **Base** Class Average (BCA), and calculated by the following formula:

$$BCA = \frac{1}{N} \sum_{i=1}^{N} RFG_{i}$$

Here, "N" stands for the total number of students excluding absentees, and the RFG<sub>i</sub> stands for the student's raw final grade.

Article 4 - The standard deviation is calculated using the RPGs of all students except absentees and the following formula, and it is called the **Basic Standard Deviation (BSD)**.

$$BSD = \frac{1}{N} \sqrt{N \sum_{i=1}^{N} RFG_{i}^{2} - (\sum_{i=1}^{N} RFG_{i})^{2}} = \sqrt{\frac{\sum_{i=1}^{N} RFG_{i}}{N}} \frac{\left(\sum_{i=1}^{N} RFG_{i}\right)^{2}}{N}}{N}$$

Here, "N" stands for the total number of students excluding absentees, and the RFG<sub>i</sub> stands for the student's raw final grade.

Article 5 - The Limit of Participation in the Relative Evaluation (LPRE) is calculated by the following formula:

#### The Limit of Participation in Relative Assessment (LPRE) = BCA - 2 x BSD

The LPRE cannot be greater than or equal to the lower limit of the FD given in Table 1. In this case, the upper limit of the FF given in Table 1 is taken as LPRE. The LPRE cannot be less than 15. In this case, the LPRE is determined as 15. Students with a Raw Final Grade less than LPRE are excluded from the calculation, and automatically receive "FF". In cases where the number of students who meet the LPRE requirement is less than or equal to ten [ $\leq 10$ ], the course instructor gives letter grades as appropriate.

Article 6 - Except for the absentees and those under the LPRE, the arithmetic average of all students' RFGs is called the Class Average (CA), and is calculated by the following formula:

$$\mathbf{CA} = \frac{1}{M} \sum_{i=1}^{M} RFG_i$$

Here, "**M**" stands for the total number of students except for the absentees and those under the LPRE, and the **RFGi** stands for the student's raw final grade.

Article 7 - The standard deviation is calculated using the RPGs of all students except absentees and those below the LPRE, and the following formula, and it is called the **Class Standard Deviation (CSD)**.

$$CSD = \frac{1}{M} \sqrt{M \sum_{i=1}^{M} RFG_i^2 - (\sum_{i=1}^{M} RFG_i)^2} = \sqrt{\frac{\sum_{i=1}^{M} RFG_i^2 - (\sum_{i=1}^{M} RFG_i)^2}{M}}$$

Here, "**M**" stands for the total number of students except for the absentees and those under the LPRE, and the **RFGi** stands for the student's raw final grade.

Article 8 - Raw Final Grade Lower Limit (RFGLL) is calculated by the formula given below.

#### **Raw Final Grade Lower Limit (RFGLL)** = CA - 1 x CSD

The LPRE cannot be greater than or equal to the lower limit of the DD given in Table 1. In this case, the upper limit of the FD given in Table 1 is taken as LPRE. The LPRE cannot be lower than 20. In this case, the LPRE is determined as 20. If the RFG of the student participating in

the assessment is less than the RFGLL, the student automatically receives an "FD".

If the  $|RFG_i - RFGLL| \le 1$ , then the student is considered to have exceeded the FESL.

# Article 9 - The Final Exam Score Limit (FESL) is 30. If the final score of the student participating in the assessment is less than 30, the student automatically receives an "FD".

If the *FIN*  $_i$  - *FESL*  $\ge$  0, then the student is considered to have exceeded the FESL.

Here, *FIN i* stands for the final score of the student.

Article 10 - Except for the absentees and those under the BDKS, the "T" grades of each student participating in the assessment are calculated by the formula given below.

$$T = 10(\frac{\text{RFG} i - \text{CA}}{CSD}) + 50$$

Here, Ti stands for the student's "T" note, and RFGi stands for the student's raw final grade.

By taking into account the class levels determined through the class average (CA), each student's letter grade is given pursuant to the figures in **Table 2** corresponding to the student's relative "T" grade and in order from the highest to the lowest in letter grades indicated by percentiles in **Table 3** corresponding to these levels. No grades can be lower than the letter grade given according to the RFG using **Table 1**. In this case, the letter grade given using **Table 1** becomes valid.

SCORE	LETTER GRADE	COEFFICIENT		
90-100	AA	4,00		
85-89	BA	3,50		
80-84	BB	3,00		
75-79	СВ	2,50		
70-74	CC	2,00		
60-69	DC	1,50		
50-59	DD	1,00		
40-49	FD	0,50		
00-39	FF	0,00		

#### **Table 1: Final Scores Catalogue Values**

Class Level	Class Average (CA)	Class Values of Relative Grades in T Grade							
		AA (4)	BA (3,5)	BB (3)	CB (2,5)	CC (2)	DC (1,5)	DD (1)	FD (0,5)
Outstanding Success	> 80 - ≤ 100	≥ 57	52 – 56,99	47 – 51,99	42 – 45,99	37 – 41,99	32 – 36,99	27 – 31,99	< 27
Excellent	> 70 - ≤ 80	≥ 59	54 – 58,99	49 – 53,99	44 – 43,99	39 – 43,99	34 – 38,99	29 – 33,99	< 29
Very Good	> 62,5 - ≤ 70	≥61	56 – 60,99	51 – 55,99	46 – 50,99	41 – 45,99	36 – 40,99	31 – 35,99	< 31
Good	> 57,5 - ≤ 62,5	≥ 63	58 – 62,99	53 – 57,99	48 – 52,99	43 – 47,99	38 – 42,99	33 – 37,99	< 33
Above Average	> 52,5 - ≤ 57,5	≥65	60 – 64,99	55 – 59,99	50 – 54,99	45 – 49,99	40 – 44,99	35 – 39,99	< 35
Average	> 47,5 - ≤ 52,5	≥67	62 – 66,99	57 – 61,99	52 – 56,99	47 – 51,99	42 – 46,99	37 – 41,99	< 37
Poor	> 42,5 - ≤ 47,5	≥ 69	64 – 68,99	59 – 63,99	54 – 58,99	49 – 53,99	44 – 48,99	39 – 43,99	< 39
Bad	< 42,5	≥ 71	66 – 70,99	61 – 65,99	56 – 60,99	51 – 55,99	46 – 50,99	41 – 45,99	< 41

### Table 2: Values of Relative Grades in T Grade

**Table 3: Percentiles of Relative Grade Ratios** 

Class Average	Class Level	0,5	1	1,5	2	2,5	3	3,5	4
		FD	DD	DC	CC	CB	BB	BA	AA
$70 \le x < 100$	Excellent	0,01	0,032	0,048	0,174	0,116	0,228	0,152	0,24
$62,5 \le x < 70$	Very Good	0,02	0,048	0,072	0,192	0,128	0,216	0,144	0,18
$57,5 \le x < 62,5$	Good	0,03	0,06	0,09	0,216	0,144	0,192	0,128	0,14
$52,5 \le x < 57,5$	Above Average	0,04	0,08	0,12	0,222	0,148	0,174	0,116	0,1
$47,5 \le x < 52,5$	Average	0,07	0,096	0,144	0,228	0,152	0,144	0,096	0,07
$42,5 \le x < 47,5$	Poor	0,1	0,116	0,174	0,222	0,148	0,12	0,08	0,04
x < 42,5	Bad	0,14	0,128	0,192	0,216	0,144	0,09	0,06	0,03