

Assessment of General Chemistry I (KIM101 and KIM101E) Courses 2021/2022 Summer Semester

General Chemistry I (KIM 101 and KIM 101E) course is designed to emphasize problem solving skills and critical thinking to engineering students as they learn the principals of chemistry and helps them to focus into the world of science and engineering.

General Chemistry I courses are given in two languages; Turkish and English:

KIM 101 Genel Kimya I, course language Turkish (3 credits)

KIM 101E General Chemistry I, course language English (3 credits)

Chemistry Department opens these courses in Summer semesters with parallel sessions.

In summer semesters, midterm and final exam questions are prepared by the course instructors.

All the students registered in the course, regardless of their course language, take the same midterm and final exam on the same day and at the same time. Grade distributions are done separately for Turkish and English sessions (as KIM101 and KIM101E) and all students are considered in the same grade distribution based on their course language. Students take a *multiple choice exam* as midterm and final exam about their general knowledge in chemistry. Exam papers are standardized so that the grade entry may be done using an optic reader. This offers the advantage of speed and lessens errors. All exam grades are recorded and posted to the websites in use (www.kimya.itu.edu.tr or www.kimyahavuz.itu.edu.tr) in a very short time after the exams.

Students must attend the session for which they are registered. A minimum of **70% attendance is required**. Periodic attendance checks are taken in class. A student who is absent for 5 lectures (over 14 lectures) gets VF.

The grading scheme is : **Midterm 50%, Final exam 50%**.

ITU has a large-scale, web-based electronic learning platform called “**Ninova**” (ninova.itu.edu.tr). It is an electronic learning and teaching resource making education quick and easy, providing many facilities to instructors and students like messaging; publishing announcements, assignments, events or notes; accessing courseware content and resources at any time and place. Students are provided by lecture notes, support materials and resources through uploaded documents on Ninova, in class files of the course they are registered.

This semester, 321 students (KIM 101 – 121 students and KIM101E - 200 students) from various departments took the course in 9 parallel sections.

Table 1 shows the grade averages for General Chemistry I-KIM 101 and KIM 101E in 2021/2022 Summer Semester.

Table 1. 2021/2022 Summer KIM 101 and KIM101E grade averages (points are over 100)

	Midterm	Final Exam	General Average
KIM 101	60.80	48.35	54.58
KIM 101E	61.60	47.70	54.65

In **Table 2** and **3**, given below, 2021/2022 Summer Semester grade averages are compared with the previous summer semesters for KIM101 and KIM101E, respectively.

Table 2. Success rate for KIM 101 section (points are given over 100)

	Midterm (40%)		Final exam (60%)	General Average
2014/2015 Summer*	50.32		46.96	48.30
2015/2016 Summer*	61.00		46.44	52.26
2016/2017 Summer*	53.92		39.88	45.5
	Midterm I (25%)	Midterm II (25%)	Final Exam (50%)	General Average
2017/2018 Summer*	50.35	46.00	44.80	46.49
2018/2019 Summer*	61.40	45.90	41.15	47.4
			Final Exam (100%)	General Average
2019/2020 Summer*	-	-	38.06	38.06
	Midterm (50%)		Final Exam (50%)	General Average
2020/2021 Summer*	57.94		50.26	54.10
2021/2022 Summer*	60.80		48.35	54.58

*multiple choice exams

Table 3. Success rate for KIM 101E section (points are given over 100)

	Midterm (40%)		Final exam (60%)	General Average
2014/2015 Summer*	48.88		43.76	45.81
2015/2016 Summer*	54.16		43.96	48.04
2016/2017 Summer*	51.20		39.36	44.10
	Midterm I (25%)	Midterm II (25%)	Final Exam (50%)	General Average
2017/2018 Summer*	47.15	39.60	45.30	44.34
2018/2019 Summer*	58.20	43.80	44.85	47.93
			Final Exam (100%)	General Average
2019/2020 Summer*	-	-	33.37	33.37
	Midterm (50%)		Final Exam (50%)	General Average
2020/2021 Summer*	55.45		42.52	48.99
2021/2022 Summer*	61.60		47.70	54.65

*multiple choice exams

For Turkish sections KIM 101:

The number of students who passed the course (including DC and DD) were 101 over 121, which is **83.47%** of the total students.

Fail (FF) grades are 8 over 121, which is **6.61 %** of the total students. VF grades are 12 over 121, which is **9.92 %** of the total students

For English sections KIM 101E:

The number of students who passed the course (including DC and DD) were 162 over 200, which is **81 %** of the total students.

Fail (FF) grades are 18 over 200, which is 9 % of the total students. VF grades were 20 over 200, which is 1 % of the total students

Table 4 and **Table 5** includes the number of the students and the percentages related with each grade for KIM 101 and KIM 101E sections:

Table 4: Grade distributions and corresponding percentages for KIM 101 sections

Letter grade	Grade	Number of students (over 121 students)	Percentage %
AA	Excellent	7	5.78
BA	Good-excellent	13	10.74
BB	Good	11	9.09
CB	Good-satisfactory	15	12.39
CC	Satisfactory	19	15.70
DC	Satisfactory-low pass	12	9.92
DD	Low pass	24	19.83
FF	Fail	8	6.61
VF	Fail without midterm	12	9.92

Table 5: Grade Distributions and corresponding percentages for KIM 101E sections

Letter grade	Grade	Number of students (over 200 students)	Percentage %
AA	Excellent	15	7.50
BA	Good-excellent	15	7.50
BB	Good	24	12
CB	Good-satisfactory	23	11.5
CC	Satisfactory	32	16
DC	Satisfactory-low pass	27	13.5
DD	Low pass	26	13
FF	Fail	18	9
VF	Fail without midterm	20	10

Figure 1 and **Figure 2** shows the grade distributions for KIM101 and KIM101E for 2021-2022 Summer Semester.

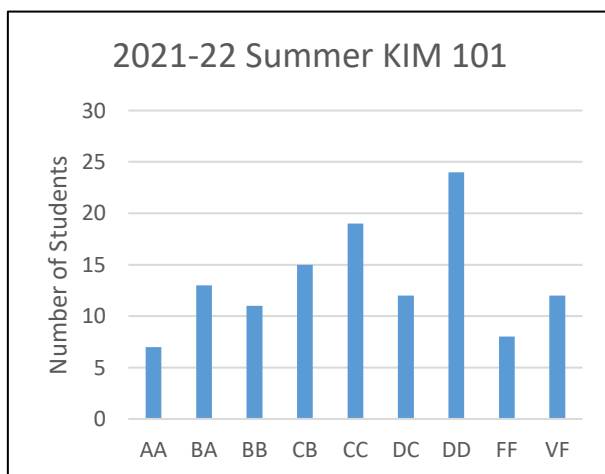


Figure 1. Grade distributions for KIM 101

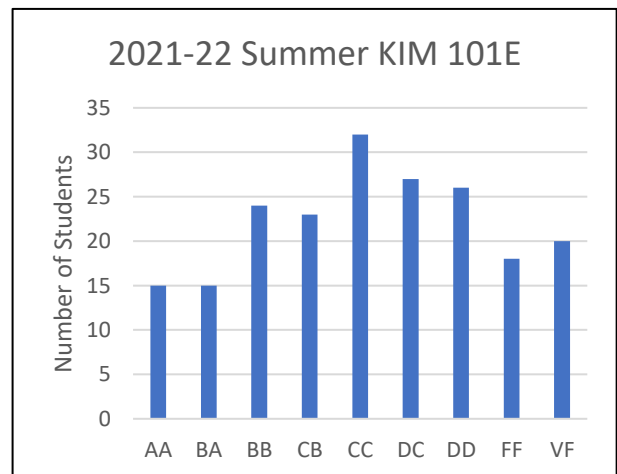


Figure 2. Grade distributions for KIM 101E

2021/2022 Summer student numbers and averages *related to each department* for KIM 101 and KIM 101E sessions are given in **Figure 3** and **4**, respectively.

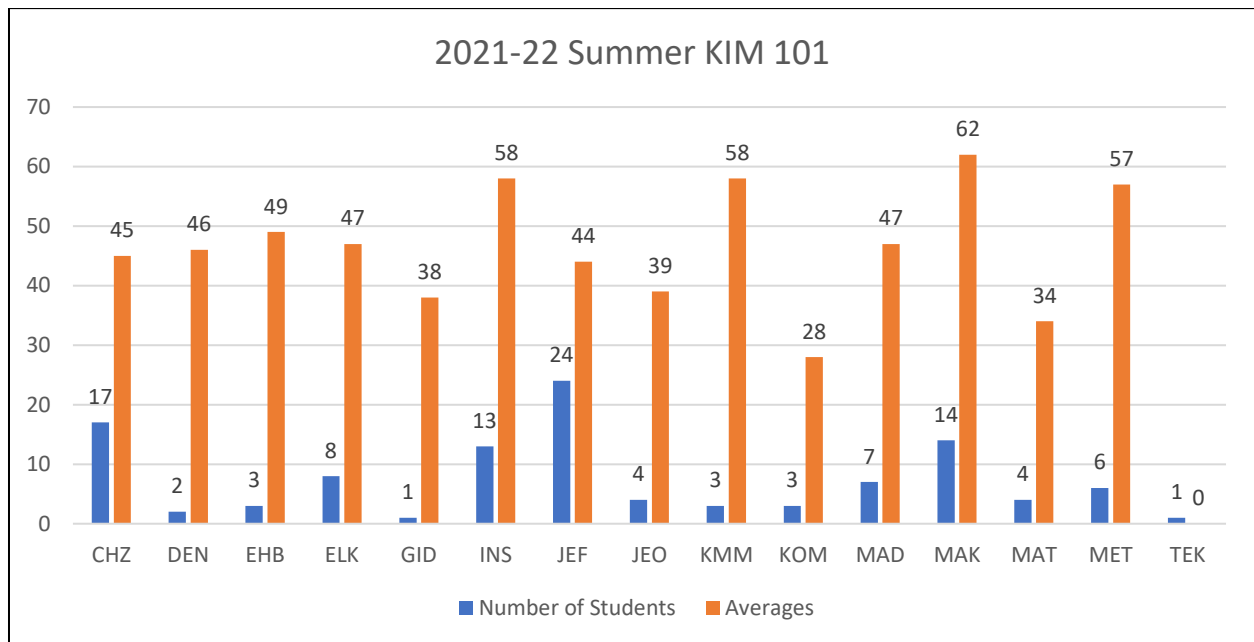


Figure 3. 2021/2022 Summer Semester Averages by Departments for KIM 101 sections.

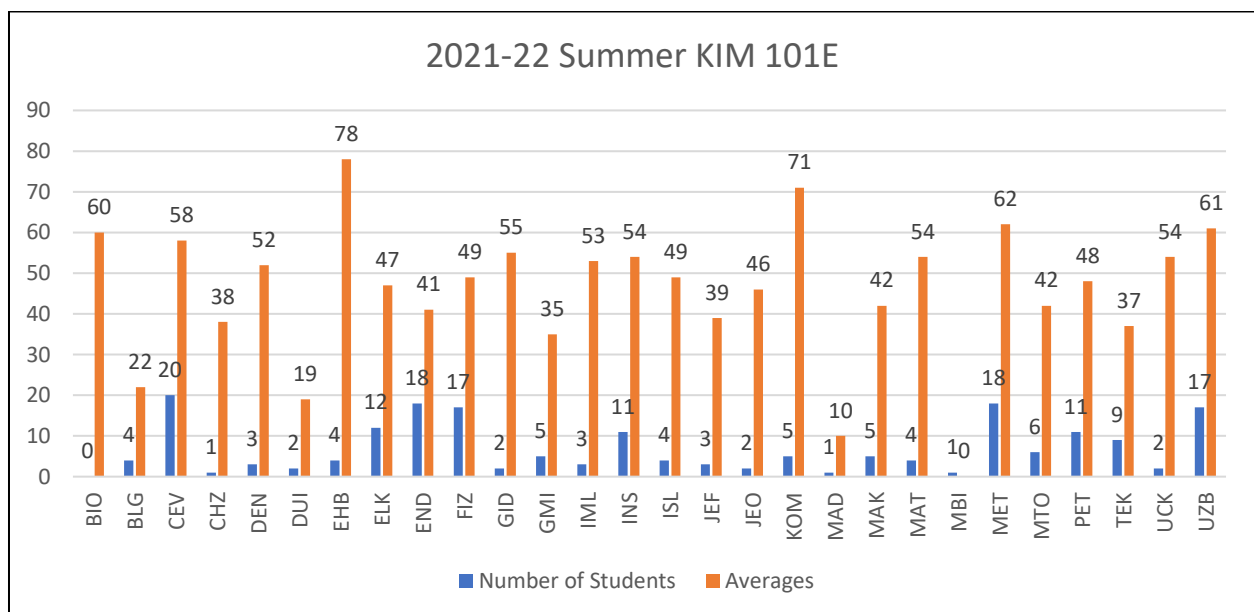


Figure 4. 2021/2022 Summer Semester Averages by Departments for KIM 101E sections.

Undergraduate program codes can be reached from the website:
<https://www.sis.itu.edu.tr/EN/about-sis/undergraduate-program-codes.php>

The highest average is from MAK (Mechanical Engineering) for KIM101 and is from EHB (Electronics and Communication Engineering) for KIM101E.

Additional paperwork can be checked from **“2021/2022 Summer Semester Folder”** in *ABET office* located in Chemistry Department. Outcomes, histograms, syllabus and all other related documents of the courses can also be found in the same folder.

ABET Committee,
Chemistry Department

September. 2022