

**General Chemistry 1** course is designed to emphasize problem solving skills and critical thinking to engineering students as they learn the principals of chemistry and help them to focus into the world of science and engineering.

General Chemistry 1 courses are given in Turkish and English languages:

**KIM 101 Genel Kimya 1**, course language Turkish (3 credits)

**KIM 101E General Chemistry 1**, course language English (3 credits)

Since 2003, the Chemistry Department has given these courses every Fall, Spring and Summer semesters with parallel sections; students are free to register for any section of their required course regardless of their department and program. But students must attend the section 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** (Fail without midterm).

All the students registered in the same course, regardless their course language, take the same midterm and final exam on the same day and same hours and is considered in the same grade distribution. Students take a *multiple choice test exams* as midterm and final exam about their general knowledge in chemistry. Exam papers were standardized so that grade entry may be done using an optic reader. This offers the advantage of speed and lessens error. The grades are recorded and are posted on the website [www.kimya.itu.edu.tr](http://www.kimya.itu.edu.tr). Students are able to check their exam paper from this website. Additionally exam locations and grades are posted on the website. Instructors can access information about their students and statistics about their courses through the site. Syllabus, course catalogue forms, outcomes, histograms of the courses are given through the site also.

The grading scheme is : **Midterm 40%, Final exam 60%**.

Each semester **an exam committee** is appointed to KIM 101 and KIM 101E courses from Department members that are not assigned to a particular course. The Committee assists with determining exam content, writing new exam questions, and editing exam questions to ensure that the exams are of the highest quality.

And each semester **a course coordinator** is appointed to KIM 101 and KIM 101E courses. Course coordinator is responsible for planning and coordinating the delivery of the Course and for ensuring an appropriate assessment with the Head of Department, who has the final responsibility. The coordinator is also responsible of organizing grading the examination papers. And also at the beginning of each semester, a meeting for all KIM 101 and KIM 101E instructors is arranged by the course coordinator. Important points related with the syllabus, the attendance to the courses, the use of legal website of the textbook (<http://cwx.prenhall.com/petrucci>) are considered and given to the attention of the

instructors as important points. Discussions related with these points are done. From this meeting, General Chemistry Course Instructors will have useful and reasonable ideas for the next semester.

Each year over 3500 freshmen attend these courses.

The lecturer of each course allocates a 2 hour office hour period for student queries that is indicated on a weekly course schedule hung on his or her door.

In Table 1 and Table 2, averages of the grades for KIM 101 and KIM 101E sections are given for the last ten years.

**Table 1. Averages for KIM 101 sections (points are given over 40)**

	<b>Midterm 1</b>	<b>Midterm 2</b>	<b>Final exam</b>
<b>2006/2007 Spring</b>	21.6	16.9	16.7
<b>2007/2008 Fall</b>	21.9	18.3	21.0
<b>2007/2008 Spring</b>	20.1	21.4	15.8
<b>2008/2009 Fall</b>	22.5	22.7	27.6
<b>2008/2009 Spring</b>	17.9	17.8	18.5
<b>2009/2010 Fall</b>	24.7	15.6	26
<b>2009/2010 Spring</b>	18.2	17.5	16.3
<b>2010/2011 Fall</b>	30.6	22.0	21.9
<b>2010/2011 Spring</b>	20.0	15.8	17.8
<b>2011/2012 Fall*</b>	25.8	20.5	21.5
<b>2011/2012 Spring*</b>	26.8	20.7	22.8
<b>2012/2013 Fall*</b>	25.2	19.4	20.2
<b>2012/2013 Spring*</b>	24.9	19.6	22.0
<b>2013/2014 Fall*</b>	25.4	22.1	24.9
	<b>Midterm</b>	<b>Final exam</b>	
<b>2013/2014 Spring*</b>	22.67	20.64	
<b>2014/2015 Fall*</b>	22.30	19.44	
<b>2014/2015 Spring*</b>	21.98	20.19	
<b>2015/2016 Fall*</b>	24.00	17.10	
<b>2015/2016 Spring*</b>	21.46	18.56	
<b>2016/2017 Fall*</b>	17.90	15.93	
<b>2016/2017 Spring*</b>	19.28	20.18	

\*multiple choice exam

**Table 2. Averages for KIM 101E sections (points are given over 40)**

	<b>Midterm 1</b>	<b>Midterm 2</b>	<b>Final exam</b>
<b>2006/2007 Spring</b>	20.5	18.8	17.2
<b>2007/2008 Fall</b>	18.3	15.3	17.0
<b>2007/2008 Spring</b>	17.4	22.4	15.2
<b>2008/2009 Fall</b>	20.9	21.7	23.4
<b>2008/2009 Spring</b>	19.5	17.7	18.9

<b>2009/2010 Fall</b>	20.1	16.7	22.9
<b>2009/2010 Spring</b>	19.4	17.9	17.0
<b>2010/2011 Fall</b>	27.9	20.4	20.0
<b>2010/2011 Spring</b>	21.2	15.2	19.4
<b>2011/2012 Fall*</b>	23.3	19.5	20.1
<b>2011/2012 Spring*</b>	26.5	19.5	22.9
<b>2012/2013 Fall*</b>	22.2	17.9	17.6
<b>2012/2013 Spring*</b>	24.4	19.4	21.4
<b>2013/2014 Fall*</b>	22.1	19.4	21.8
	<b>Midterm</b>	<b>Final exam</b>	
<b>2013/2014 Spring*</b>	21.65	18.11	
<b>2014/2015 Fall*</b>	19.25	16.32	
<b>2014/2015 Spring*</b>	22.16	19.69	
<b>2015/2016 Fall*</b>	21.07	14.46	
<b>2015/2016 Spring*</b>	18.56	17.84	
<b>2016/2017 Fall*</b>	15.04	13.92	
<b>2016/2017 Spring*</b>	19.42	18.86	

**\*multiple choice exam**

One of the main problems of these courses could be noticed from given Tables, as a - significant differences between English and Turkish sections-. The students still have difficulties in following the English section courses and understanding the questions asked in the exams. This problem seems to be the problem encountered almost in all courses especially in the first years and has to be solved university-wide.

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