

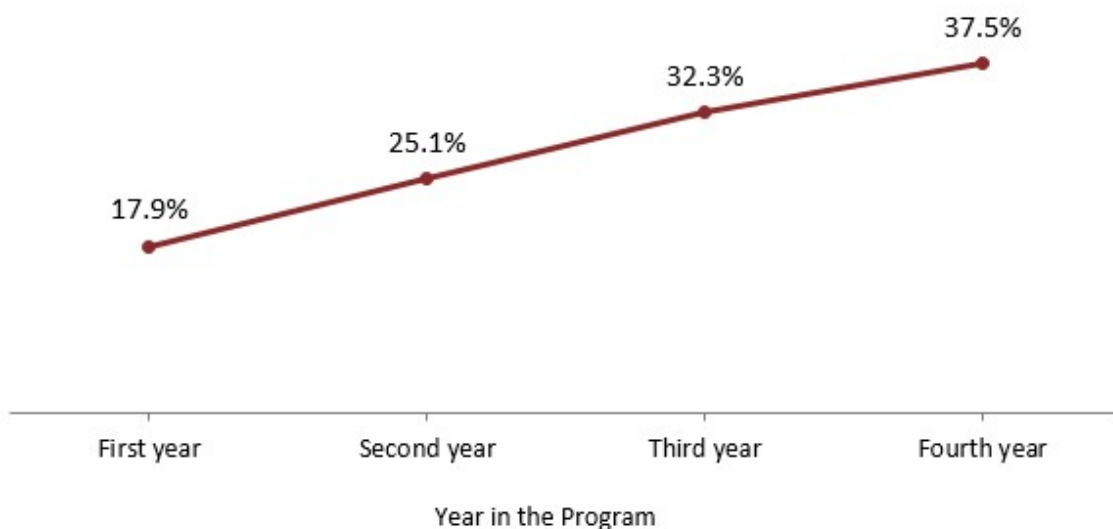
Class Absenteeism in Engineering: What is its Prevalence and how Does it Impact Academic Performance?

Class attendance/absenteeism has been the subject of significant interest among scholars and practitioners, as academic institutions look for ways to enhance student learning and success. However, little attention has been paid to attendance/absenteeism in engineering fields. [This study](#) uses a unique dataset with attendance records for five cohorts of NU engineering students (N=794). We use basic and advanced statistics methods to examine absenteeism and its impact on semester GPA. Class attendance had been tracked electronically in 91 unique (203 duplicate) courses from fall 2013 to spring 2016.

Results suggest that absenteeism increased with time in the program (Figure 1). Absenteeism rates for four-year undergraduate students were more than double the rates for first-year students. Evidence also suggests that absenteeism rates were substantially higher in spring compared to fall semesters.

Figure 1. Percent of engineering class sessions missed over time (Fall 2013-Spring 2016)

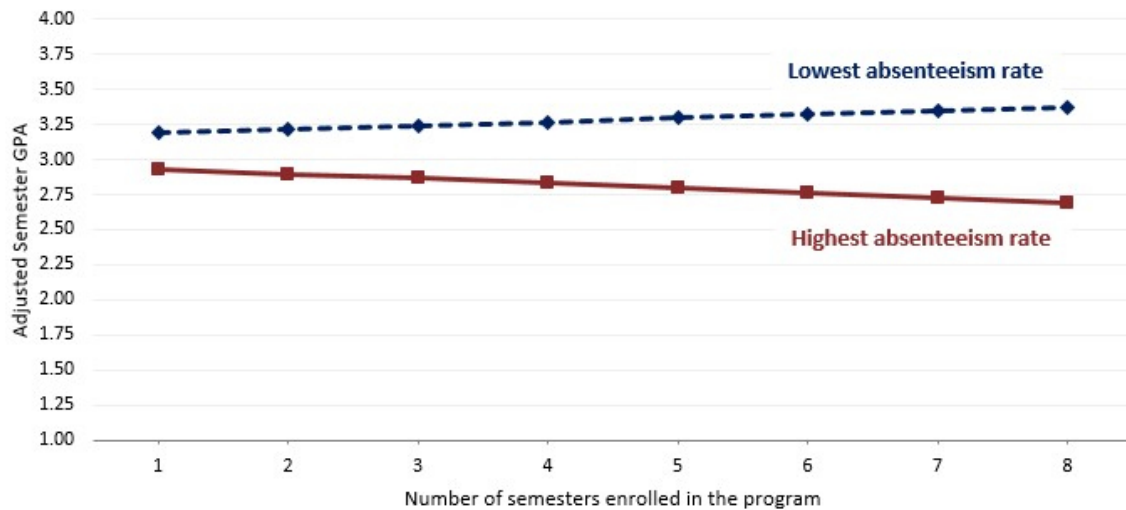
Absenteeism rates increased with time in the program. Rates were lowest among first-year and highest among fourth-year students.



We classified students into four groups based on absenteeism rates and found that students in the bottom group missed around 10% and those in the top group around 45% of class sessions (with variations based on length of time in the program). There was a substantial difference in academic performance between the two groups. Figure 2 indicates that students with the highest absenteeism rate had a level of academic performance that was substantially lower compared to that of students with the lowest absenteeism rate. This difference increased with time in the program (0.5 to 1.8 standard deviations).

Figure 2. Adjusted term GPA for students with the lowest and highest absenteeism rates

Students with the highest absenteeism rate had substantially lower term GPA compared to those with the lowest absenteeism rate. The difference in performance increased with time in the program.



Such findings often lead to a debate about whether or not attendance should be mandatory. There is no consensus among scholars/practitioners; proponents and opponents of mandatory attendance have offered different arguments on this issue.

What is clear, however, is that efforts to minimize absenteeism should focus on:

- fostering sound instructional/pedagogical practices that stimulate student motivation and learning, and
- putting into place support mechanisms (formal/informal) to help students cope with barriers to class attendance.

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We invite you to write to IR (ir@nu.edu.kz) and (1) share your thoughts and experiences relative to the topic under discussion in this **IR-MFF** issue and/or (2) suggest a question/topic that you would like us to address in a future issue of the **IR-MFF**.

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