

Worksheet 05: Introduction to Cluster Sampling

Dr. D's Solutions

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A student wants to estimate the average GPA in their dorm. Obtaining a listing of all students in the hall and conducting an SRS would take a lot of time. Instead, since each of the 100 suites in the hall have 4 students, the student randomly samples 5 suites and collects GPA data for each student in the suite. A summary table is shown below.

person	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5
1	3.08	2.36	2.00	3.00	2.68
2	2.60	3.04	2.56	2.88	1.92
3	3.44	3.28	2.52	3.44	3.28
4	3.04	2.68	1.88	3.64	3.20

Using hand written equations, estimate the average GPA for all students living in that dorm, with a proper 95% CI. Interpret your interval