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# A Case Study on the Effectiveness of Attendance Policies in Introductory Science Courses

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# A Case Study on the Effectiveness of Attendance Policies in Introductory Science Courses

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# Campus-Wide Perceptions Study<sup>1</sup>

## Background Information

- Anonymous surveys completed by 455 students and 89 faculty members on Southern Polytechnic State University campus in Spring 2014
  - Architecture
  - Arts and Sciences
  - Computer and Software Engineering
  - Engineering
  - Engineering Technology and Management

# Campus-Wide Perceptions Study<sup>1</sup>

## Background Information

### Student Survey Questions

**Pick a course you have taken that had (or did not have) an attendance policy - Select the course level**

**For the above course, what percentage of classes did you attend?**

**For the above course, how do you think the attendance policy (or lack of attendance policy) affected your final grade?**

### Faculty Survey Questions

**For a 1000 (or 2000, 3000, 4000) level lecture course, do you enforce attendance policy in your class? (excluding laboratory/studio courses)**

**For the above 1000 (or 2000, 3000, 4000) level course, do you have an attendance policy written in your syllabus?**

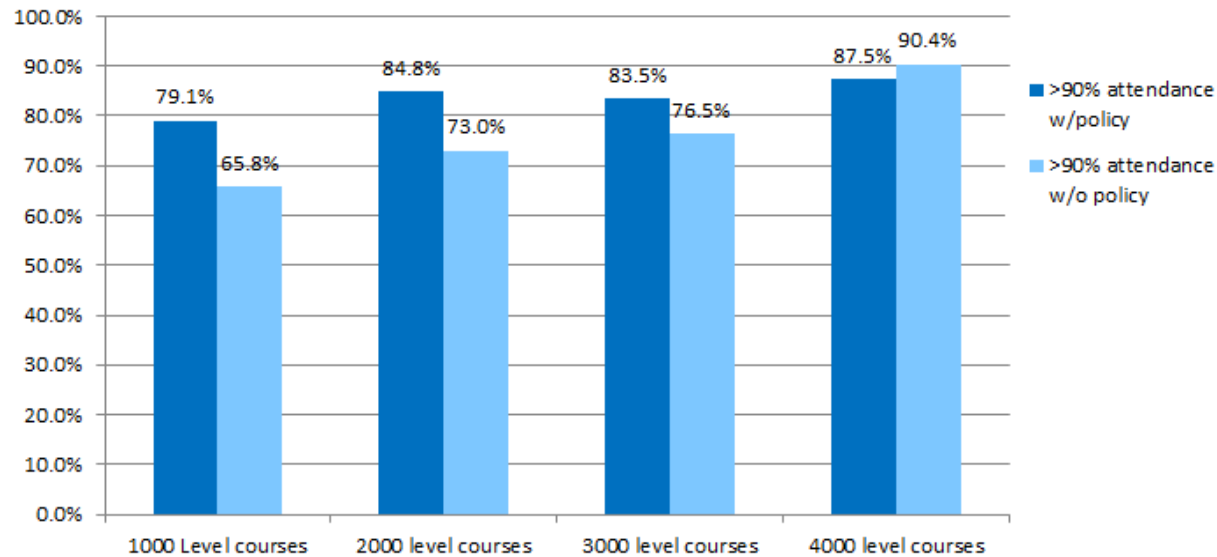
**For the above 1000 (or 2000, 3000, 4000) level course, do you believe students earn better grades because of the explicit attendance policy?**



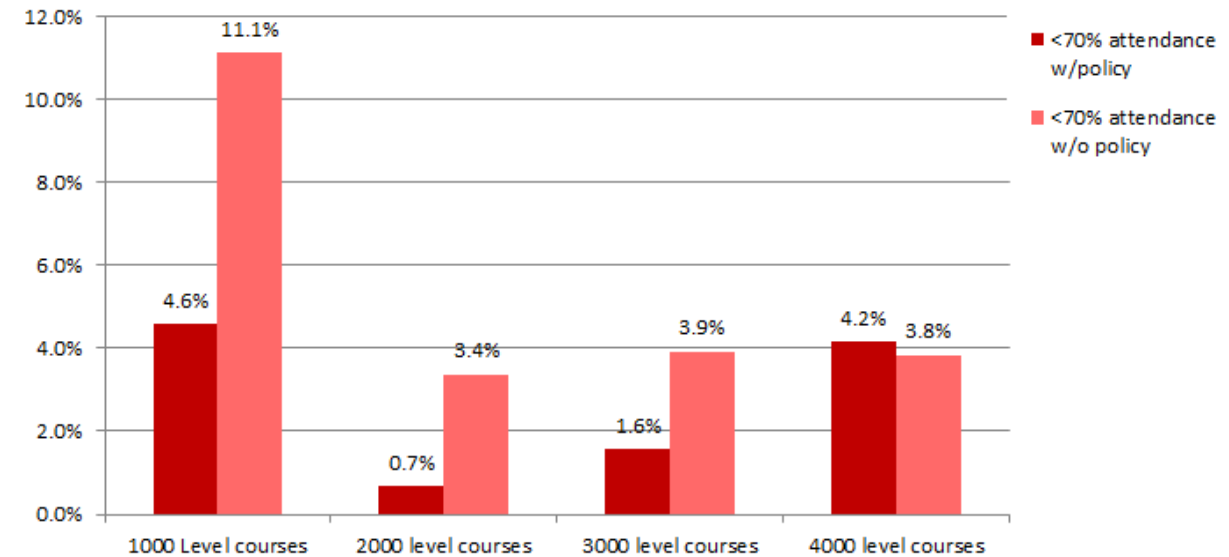
# Students' Perceptions of Attendance Policies

- Students tend to attend more classes in courses with an attendance policy

Impact of Attendance Policy on Class Attendance Rate



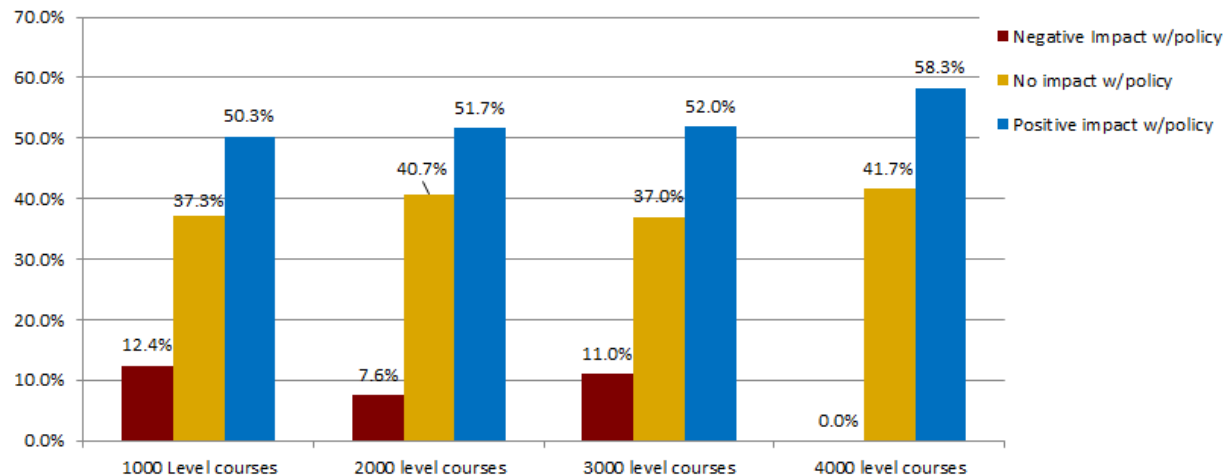
Impact of Attendance Policy on Class Attendance Rate



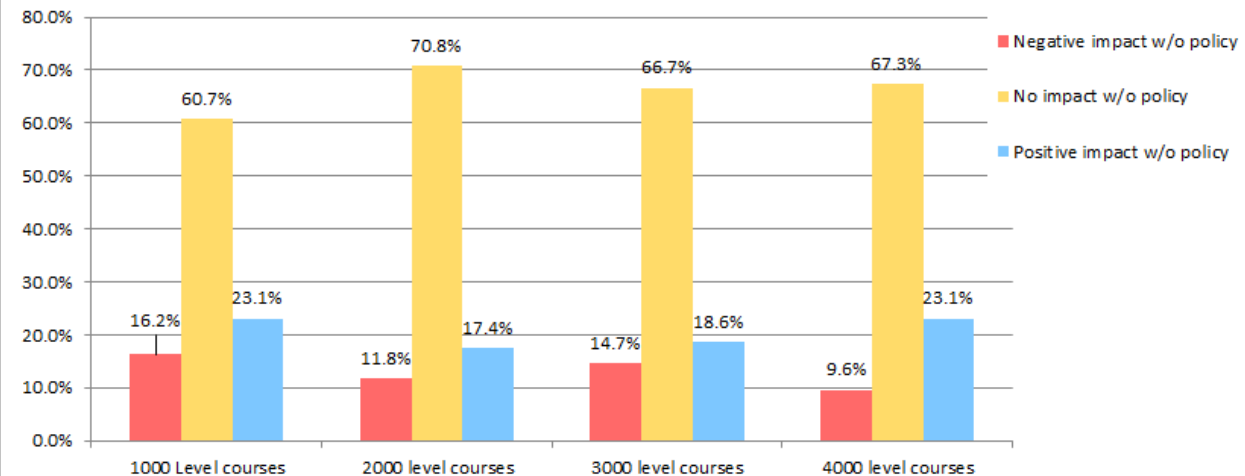
# Students' Perceptions of Attendance Policies

- In courses that have mandatory attendance policies, a majority of students think that the attendance policies have a positive impact on their grades
- In courses that do not have mandatory attendance policies, a vast majority of students think that the lack of attendance policies has no impact on their grades

Impact of Attendance Policy on Grades

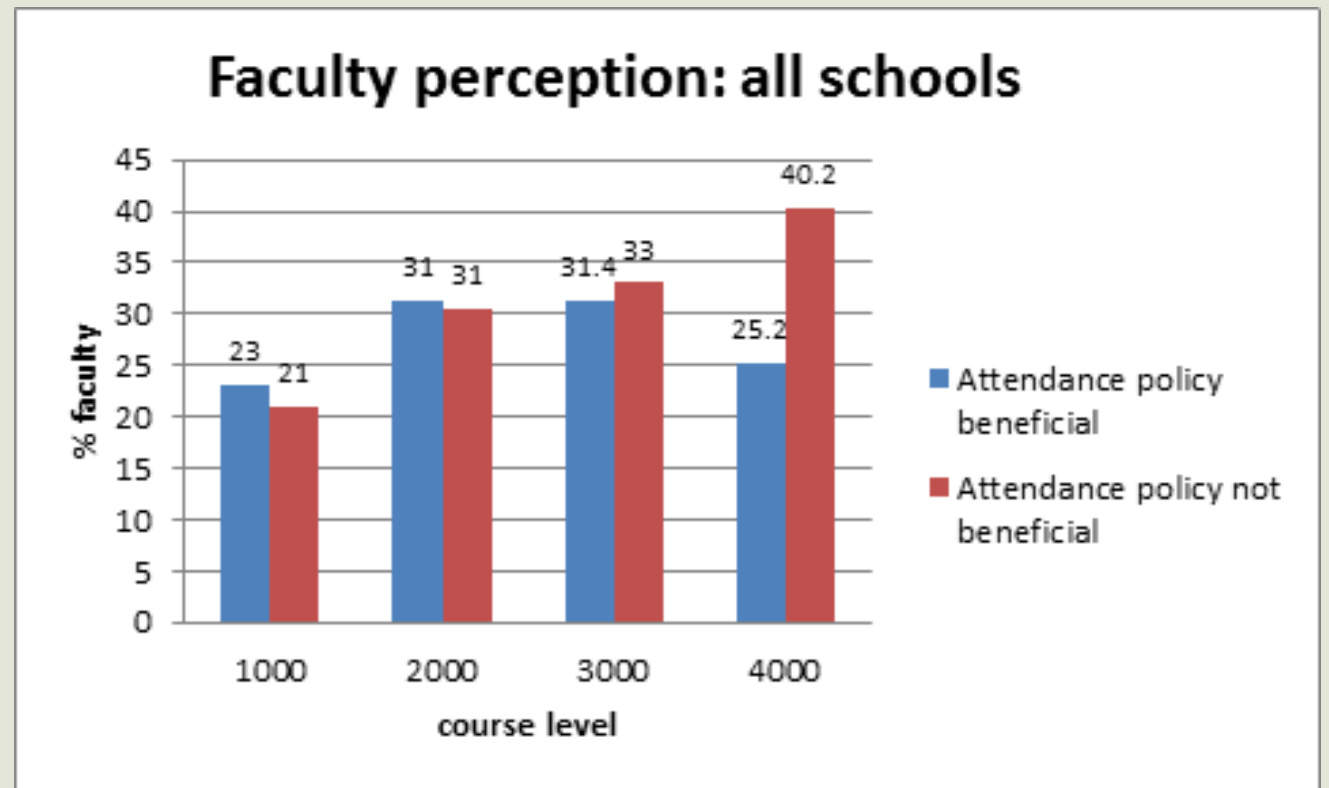


Impact of Attendance Policy on Grades based on course level



# Faculty Members' Perceptions of Attendance Policies

- In 1000, 2000, and 3000 level courses, the percentage of faculty who think that the attendance policy is beneficial is almost equal to the percentage of faculty members who think an attendance policy is not beneficial
- In 4000 level courses, a larger percentage of faculty members think that the presence of an attendance policy has no beneficial effect on student success



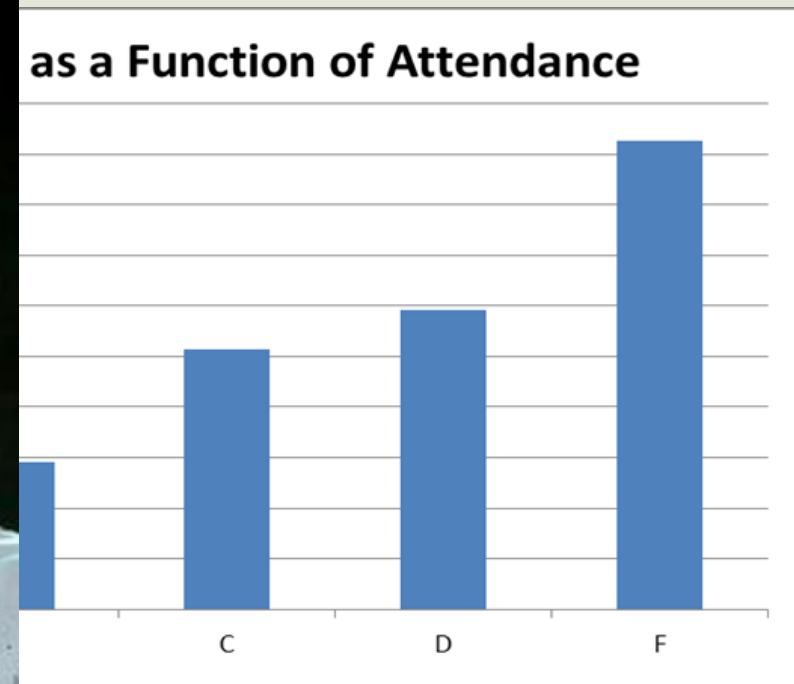
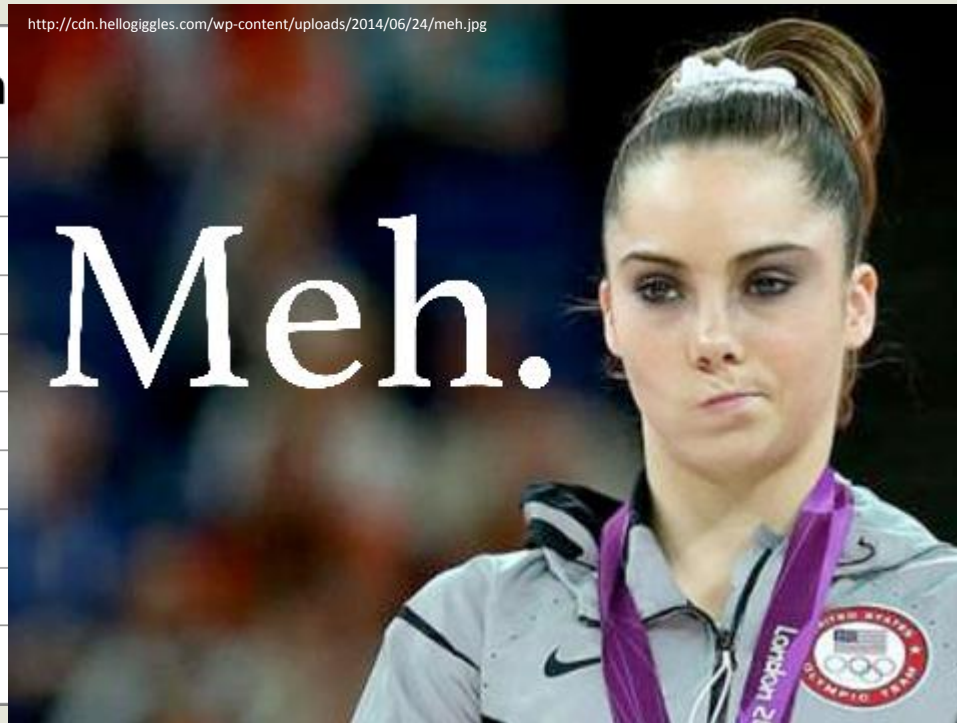
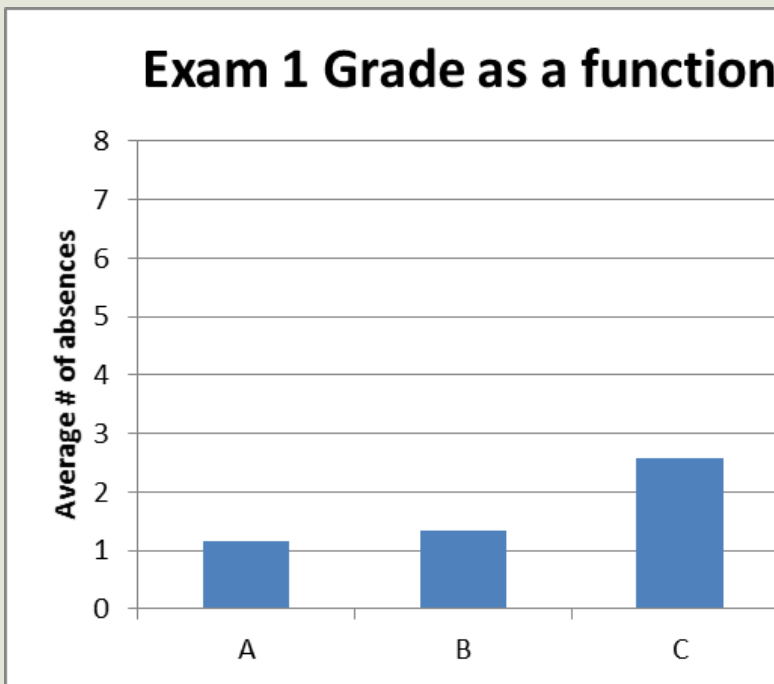
# Case Study Background Information

- Two classes: Principles of Chemistry I (CHEM 1211) & Intro to Environmental Science (ENVS 2202K)
- CHEM 1211 taught with no attendance policy Fall 2012, CHEM 1211 & ENVS 2202K taught with no attendance policy Spring 2013
- 14.7% of students missed >20% of CHEM 1211 lectures Fall 2012
- 30.3% of students missed >20% of CHEM 1211 lectures Spring 2013
- 36.6% of students missed >20% of ENVS 2202K lectures Spring 2013



# Impacts of Lecture Attendance

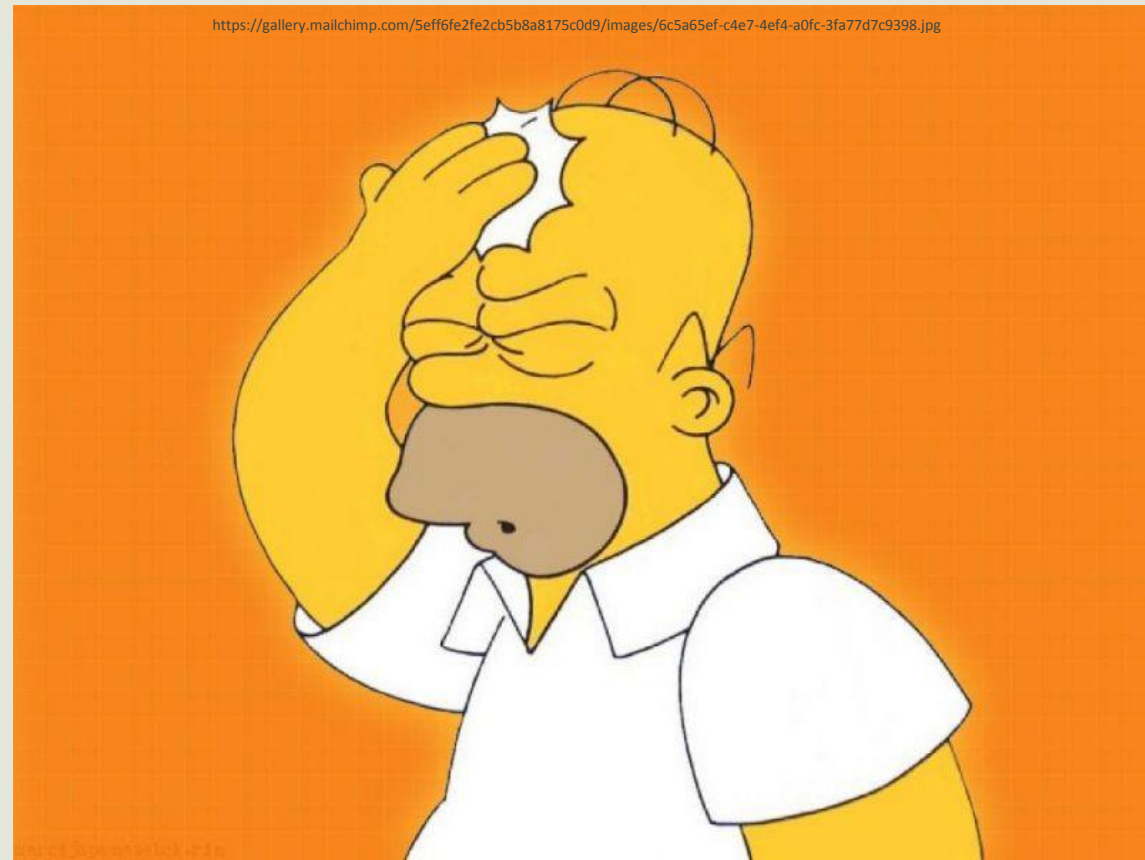
- Clear relationship between CHEM 1211 attendance & exam grades



- Student response when shown this information?

# Implementation of Attendance Policy

- Students did not change behavior despite being shown that good attendance results in better grades
- Attendance policy implemented in Fall 2013:
  - First 3 absences, no penalty
  - Each absence after the third results in -2 points to final grade
  - Perfect attendance = +2 points to final grade



# Impacts of Attendance Policy

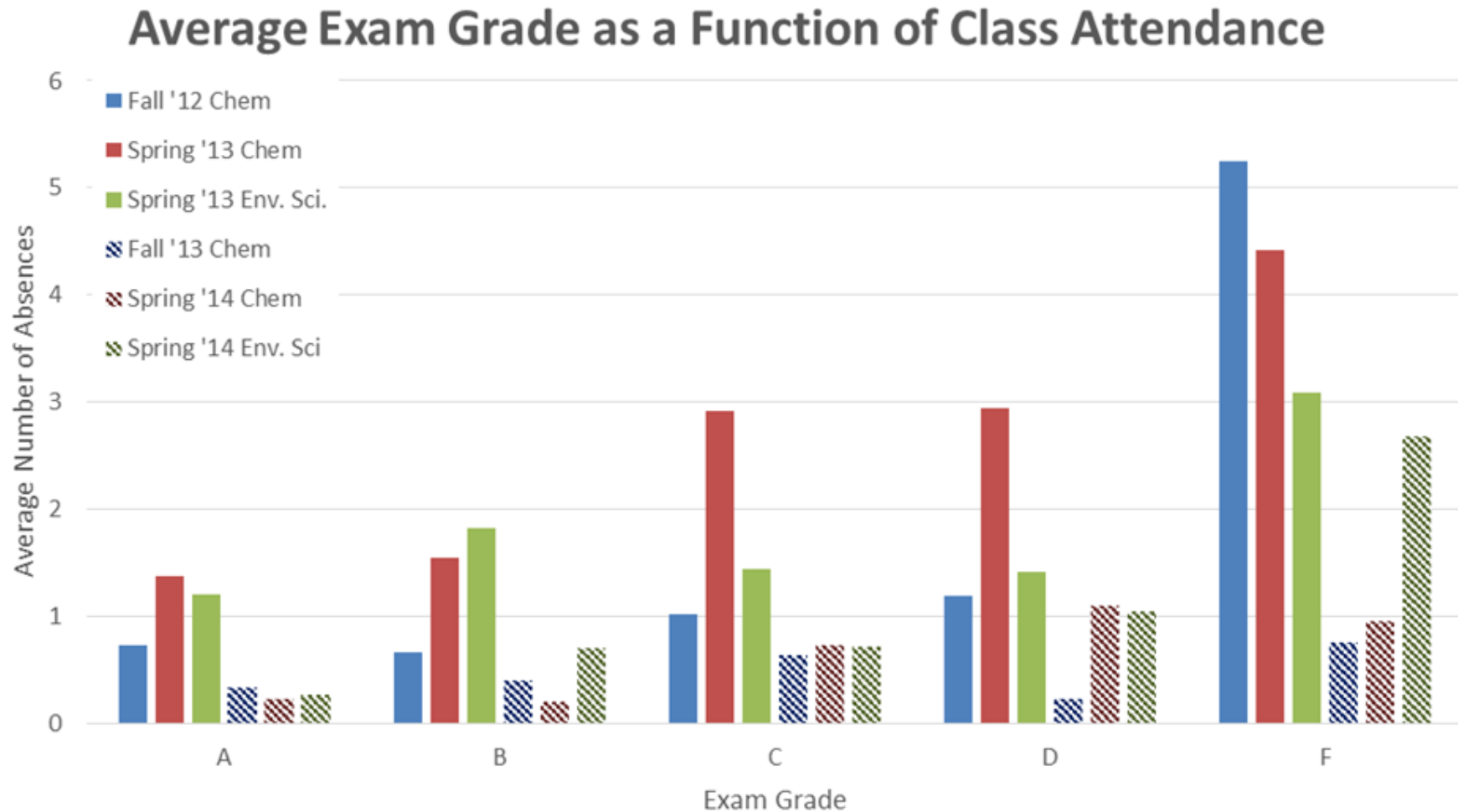
- New policy resulted in a dramatic improvement in lecture attendance

	Course Designator	# Active Students	# Students missing $\geq 20\%$ lectures	% students missing $\geq 20\%$ lectures
Fall 2012	CHEM 1211	34	5	14.7%
Spring 2013	CHEM 1211	66	20	30.3%
Spring 2013	ENVS 2202K	41	15	36.6%
Fall 2013	CHEM 1211	52	2	3.8%
Fall 2013	CHEM 1211	48	3	6.3%
Spring 2014	CHEM 1211	50	5	10%
Spring 2014	ENVS 2202K	44	3	6.8%



# Impacts of Attendance Policy

- Trend between attendance rates and grades continues even after policy is implemented
- Total absences decreased after Fall '13 semester





# Impacts of Attendance Policy

- Unfortunately, improvement in lead to corresponding improvement in student
- Overall grades and course DFW rates remain largely unchanged
- Absent students are now present physically but not mentally



# Conclusions

- Students admit to attending more classes in courses with a mandatory attendance policy
- Amongst both students and faculty members, there is no clear consensus as to whether attendance policies positively impact grades
- There is a clear link between lecture attendance and exam grades
- Attendance policies may improve student attendance, but may not lead to desired improvements in student performance
- More needs to be done to engage would-be truant students once you get them physically into the classroom

# References

1. Lowder L., Khalid A., Ferreira D., Bohannon J., Stutzmann B., Atiqullah M., Singh R., Yee T., Acharya K., Chin C., Karim M., Keyser R., and Colebeck D., "Student and Faculty Perceptions of Attendance Policies at a Polytechnic University." *Proc. of 122<sup>nd</sup> ASEE Annual Conference and Exposition, Seattle, WA , June 2015.*