Increasing Attendance at Voluntary Academic Tutoring Sessions on a Large University

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Meghan Sadler, having been admitted to the Carl and Winifred Lee Honors College in Fall 1998 successfully presented the Lee Honors College Thesis on April 24, 2001.

The title of the paper is:

"Increasing Attendance at Voluntary Tutoring Sessions on a Large University Campus"

Dr. John Austin, Psychology Department

Dr. Judy Sadler, School of Nursing

Sam King, Sociology Department
Increasing Attendance at Voluntary Academic Tutoring Sessions on a Large University Campus

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Increasing Attendance

Abstract

High attrition rates have become an impetus for colleges and universities to develop programs to help students during the first years of their education. Various services such as supplemental instruction, tutoring, testing, counseling, college success seminars, and remedial help are offered to help students be successful in their university studies. While these services may be offered, encouraging students to voluntarily attend these sessions is a problem. This study was conducted to analyze the effect of prompts on improving the attendance at voluntary content tutoring sessions at a large Midwestern University. The participants were college students enrolled in any course that had corresponding tutoring provided for the class. Approximately 6,320 students were contacted in the academic disciplines of Mechanical Engineering, Chemistry, Mathematics, Physics, Biology, Computer Science, Economics, and German. The intervention consisted of visiting all classes whose instructor responded positively to an email request to visit the class. The students in the classes where informed about the tutoring that was offered for their class, given fliers that summarized all of the services provided by the tutoring service, and given the choice to sign up to receive e-mail reminders about the times and dates of the tutoring sessions. The resulting attendance at tutoring sessions showed only a slight increase in the mean number of students in attendance at each tutoring session. A statistically significant difference was found in the mean attendance in the biology and computer science classes. The other six classes had no significant change in mean attendance. The conclusion was made that non-contingent prompts used to increase attendance at voluntary tutoring sessions are not effective in creating a large behavior change.
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Increasing Attendance

at Voluntary Academic Tutoring. Sessions on a Large University Campus

Approximately 50 percent of freshmen enrolled in colleges and universities drop out before completing their programs of study; this rate of attrition has been increasing since the 1970's (Brawer, 1996; Seidman, 1996). High attrition rates have become an impetus for colleges and universities to develop programs to help students during the first years of their education. On the university campus studied, various services are offered through the Academic Skill Center, an office that provides supplemental instruction, tutoring, testing, counseling, college success seminars, and remedial help, free of charge to students enrolled at the university. Although many studies have been conducted that show tutoring lowers attrition rates, increases GPAs, and is cost effective as compared to other programs (Abrams & Jernigan, 1984; House & Wohlt, 1990; 1984; Levin, 1988), the office studied has experienced problems with low attendance at tutoring sessions and economic constraints imposed on it by the university.

The budgetary constraints placed upon the organization greatly limited its ability to provide necessary services, secure new or retain qualified individuals for job positions, and limited its ability to properly market the services that were offered. While peer tutoring has been shown to be one of the most cost-effective methods for increasing GPA and reducing attrition rates (Levin, 1988) often the benefits it provides are overshadowed by low attendance at tutoring sessions. The purpose of this study was to address the issue of low attendance at free drop-in tutoring sessions at the University in question. Even though students report peer tutoring as favorable and as a
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way to improve academic performance (Coyne, 1978) attendance at voluntary
academic tutoring services is a difficult behavior to promote. The research conducted by
Bassett and colleagues (1974) on increasing attendance at a remedial education facility
in a penal setting stated, "facilities for remedial education can benefit a man only if he
attends...[and] despite an enthusiastic staff that had tried various 'advertising'
procedures to increase the enrollment of the center, utilization was relatively poor" (p.
21). At the participating university during the fall semester, approximately 480 tutoring
sessions were held in a variety of academic disciplines. Four hundred and seven (407)
individual students were served in these sessions, with some students attending
multiple sessions for a total student attendance of 977. On a campus with a student
population of 29,000, the number of students taking advantage of these services is
small (see Table 1). On average less than one student attended per session (0.85),
meaning that some sessions had no attendance.

Table 1
Student Services by Breakdown Program Area (Fall 2000)

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Student Attendance</th>
<th>Total Individual Students Served</th>
<th>Average Hours Per Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Tutoring</td>
<td>977</td>
<td>407</td>
<td>4.2</td>
</tr>
<tr>
<td>Math Review</td>
<td>315</td>
<td>80</td>
<td>1.0</td>
</tr>
<tr>
<td>College Success</td>
<td>1140</td>
<td>294</td>
<td>0.06</td>
</tr>
<tr>
<td>Student Support Program</td>
<td>234</td>
<td>234</td>
<td>--</td>
</tr>
<tr>
<td>Supplemental Instruction</td>
<td>3291</td>
<td>1091</td>
<td>2.6</td>
</tr>
</tbody>
</table>
Some of the statistics collected by the Academic Skill Center show an average increase in grade point average (GPA) of 0.28 (out of a 4.00 scale) by students who attended tutoring services as compared to their classmates who did not attend. In a study by House and Wohlt (1990) minority students who used tutoring services obtained higher grade point averages (GPAs), earned more credit hours, and had a higher retention rate than those students who did not participate in tutoring during their freshman year in college. Grade point average was found to be positively correlated with the number of times a student attended tutoring sessions, and with the quality of writing that students produced (House & Wohlt, 1990; Oley, 1990). A study by Abrams and Jernigan (1984) found that increasing the contact hours between a student and a tutor was positively correlated with first year GPA for traditionally underrepresented students.

In a study by Gahen-Rech and colleagues (1989) it was shown that students who attended six or more tutoring sessions performed significantly better in the same class than those students who attended one to five tutoring sessions or zero tutoring sessions. An interesting finding in this study was that participants who did not attend any tutoring sessions had much higher placement scores than did other students enrolled in the course. Those students with higher placement scores still had lower total points for the class upon completion than did those students who attended tutoring six or more times. These results demonstrate that even those students who were classified as being able to excel in the class did better when they attended tutoring than those who were classified as being able to excel in the class who did not attend tutoring.
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Even though tutoring has been demonstrated to be effective at increasing grade point averages and university retention rates, due to the lack of funding at the organization in the current study, a relatively inexpensive yet powerful intervention had to be found. The combination of these two variables proved to be difficult. Studies using antecedent variables such as prompts, which are defined as "a supplemental stimulus that raises the probability of a correct response" (Malott, Whaley, & Malott, 1997, p. 459) appeared to provide the answer to the problems of expense and robustness in an intervention. Although prompts do not produce a dramatic change, they are one of the most cost-effective strategies to use.

The use of prompts to increase the attendance at events has proven to be effective in reminders for immunization for preschool aged children (Yokley & Glenwick, 1984). Yokley and Glenwick (1984) used six different conditions including a general prompt, a more client specific prompt, a specific prompt and increased public health clinic access, a specific prompt and monetary incentives, contact control, and no contact control. The monetary incentive and increased access to the public health clinic appeared to have the largest effect, but also had the highest cost. The use of the client-specific prompts alone appeared to be the most cost-effective of the interventions for the result they produced. Along the same lines, Bunck and Iwata (1978) used prompts to increase participation in a community-based nutritious meal program. In this study incentives had the greatest results and cost-effectiveness, but the researchers still felt an efficient prompting procedure produced more behavior change per dollar or unit time spent than a costly reinforcement program.
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Studies of the use of prompts without consequences to increase attendance at voluntary tutoring sessions on a large university campus were not found in the literature. Reports of studies were limited to more structured environments such as prisons and nursing homes. Studies on the use of prompts without consequences to increase attendance at a voluntary program in a penal setting and to increase attendance at nursing homes social events have the distinct advantage of having a captive subject pool and a controlled setting. Applying the principles and interventions used in these studies to a large university campus presented many difficulties. The combination of prompts without consequences and a dynamic subject pool created a new dimension to the reported studies of prompts used to increase attendance. Prompts have been found to be cost-effective and efficient in increasing attendance at events that have traditional had low attendance. The current study represented an attempt to increase attendance at voluntary academic tutoring sessions by using non-contingent prompts.
Method

Participants and Setting

Students enrolled in any classes that corresponded with tutoring offered in the academic disciplines of Biology, Physics, Mathematics, Mechanical Engineering, Chemistry, Computer Science, Economics, and German at a Midwestern university with an approximate enrollment of 29,000 students, were included as potential participants for this study. Students enrolled in these courses included freshmen through senior students with an age range of 17 to 70. The approximate total number of students contacted during the study was 6,320.

Intervention

This package intervention consisted of three separate components, class visitations, informational fliers, and e-mail reminder lists.

Class Visitations. The researcher with two full time assistants and two part time assistants visited each of the classrooms that corresponded to academic disciplines selected in baseline. During the visit a verbal description of the availability of tutoring was given as written in a script followed by the researcher and assistants (see Appendix B for the text of the script).

Informational Fliers. During the visit to each classroom, fliers that contained information about the services that the Academic Skill Center offered were distributed to those students who wanted one (see Appendix C for an example of the flier).

E-mail Reminder Lists. Students were asked to place their email address on a sign-up sheet that was circulated in the class. The students were told that signing the e-mail list was totally voluntary and that they did not have to add their name and e-mail if
they did not want to. The addresses collected were used to send reminders of the tutoring session approximately 24 hours before the tutoring session to each student on the list (see Appendix E for an example of the e-mail list and examples of student responses to the e-mail messages).

**Dependant Variables**

A measure of attendance at each tutoring session compiled and recorded by the Academic Skill Center was the only dependent variable used.

**Design and Procedures**

Approval was granted to conduct this study with exempt status from the Human Subjects Institutional Review Board at the University studied (See Appendix D for letter of approval). The basis for the exemption was that the only data collected were total attendance numbers. No tutorial session attendees (students) could be individually identified in any of the data collected. All data used in the study were collected and used by the organization involved in the study and the study was conducted with the permission of the organization. The experimenter also signed a confidentiality agreement with the organization prior to starting the study. All information involving names or e-mail addresses were kept confidential and were destroyed by shredding at the end of the study.

A modified multiple baseline design with two groups was used in this study. Baseline data were compiled across academic disciplines from the previous and current semesters using the Academic Skill Center database. The database was created and maintained by the Academic Skill Center for its own record keeping purposes. Baseline was graphed and observed until it appeared relatively stable in all subject areas. Due to
the large number of disciplines and classes selected, a multiple baseline design across disciplines was selected to evaluate the impact of the interventions. Two baseline groups were established: Biology, Physics, Mathematics, Chemistry, and Mechanical Engineering were placed into one group (group A) and Computer Science, Economics, and German were placed into a second group (group B). The intervention was applied to group A first and followed by group B one week later.

Results

Classes Visited. Only the professors who taught classes corresponding to the classes where tutoring was provided and who replied to an initial e-mail request for permission to visit the classroom were visited. Permission to visit classrooms varied by department. Classrooms were visited as follows: Biology 37.5% (3/8); Chemistry 100% (6/6); Computer Science 53% (8/15); Economics 61% (11/18); German 9% (1/11); Mathematics 45% (32/71); Mechanical Engineering 5% (1/18); and Physics 32% (7/22).

Number of Students Contacted. The total approximate number of students contacted was 6,320 including 260 Biology students, 1,030 Chemistry students, 410 Computer Science students, 1,520 Economics students, 30 German students, 1,640 Mathematics students, 30 Mechanical engineering students, and 1,400 Physics students. The total approximate number of students contacted through e-mail reminders included 15 Biology students, 75 Chemistry students, 28 Computer Science students, 14 Economics students, 4 German students, 200 Mathematics students, 4 Mechanical Engineering students, and 8 Physics students. The number of reminders that each student received varied because of the constant addition of students to the e-mail lists through the intervention weeks.
Group A. Group A did not show any dramatic change over baseline (see Figures 1-5 in Appendix A) in the weeks following the class visits. However, a slight increase in the mean number of students attending sessions did occur. Mechanical Engineering attendance increased from a mean of 1.56 students per session to a mean of 2.25. Chemistry increased from 2.37 to 3; Mathematics increased from 4.57 to 5.85; Physics decreased from 3.88 to 2.64 and Biology increased from 1.05 to 2.11 students per session. The only statistically significant difference in the mean attendance before and after the intervention was found in the biology courses (t=1.994, p=.00417).

Table 2

<table>
<thead>
<tr>
<th>Class</th>
<th>Baseline mean</th>
<th>Intervention mean</th>
<th>T-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical</td>
<td>1.56</td>
<td>2.25</td>
<td>1.67 one-way</td>
<td>0.115</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.00 two-way</td>
<td></td>
</tr>
<tr>
<td>Engineering</td>
<td>2.37</td>
<td>3</td>
<td>1.67 one-way</td>
<td>0.717</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.00 two-way</td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>4.57</td>
<td>5.85</td>
<td>1.669 one-way</td>
<td>0.206</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.99 two-way</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3.88</td>
<td>2.64</td>
<td>1.667 one-way</td>
<td>0.18824</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.994 two-way</td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>1.05</td>
<td>2.11</td>
<td>1.667 one-way</td>
<td>0.00417</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.994 two-way</td>
<td></td>
</tr>
</tbody>
</table>

Group B. Group B did not show any changes over baseline (see Figures 6-8 in Appendix A) in the week following the class visits (see Table 3). However, a slight increase in the mean number of students attending sessions did occur. In German tutoring sessions the mean number of students in attendance went from 1.54 to 1. Economics also decreased going from 0.75 to 0 mean average per study session. Computer Science was the only discipline in Group B to show improvement in the mean
Increasing Attendance

number of students per study session with an increase of 3.13 to 5.4. This change in mean attendance was also statistically significant (t=1.99, p=0.0184).

Table 3
T-Test Results Group B

<table>
<thead>
<tr>
<th>Class</th>
<th>Baseline mean</th>
<th>Intervention Mean</th>
<th>T-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>German</td>
<td>1.54</td>
<td>1</td>
<td>1.67</td>
<td>0.4456</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.01</td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>0.75</td>
<td>0</td>
<td>1.67</td>
<td>0.267</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.00</td>
<td></td>
</tr>
<tr>
<td>Computer Science</td>
<td>3.13</td>
<td>5.4</td>
<td>1.66</td>
<td>0.0184</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.993</td>
<td></td>
</tr>
</tbody>
</table>

Discussion

In general the results of this study show a low effectiveness rate for non-contingent prompts used to increase attendance at voluntary academic tutoring sessions. "Substantial research on prompting methods has led to a consensus that, in general, non-criterion-related procedures (those procedures that do not involve reinforcement or punishment) are not reliable" (Mcllvane, Kledaras, Killory-Andersen, & Sheiber, 1989, p. 137). Geller et al. (1982) stated that prompts are not highly effective unless accompanied by a consequence unless the prompts (a) make a specific request or appeal, (b) are in close proximity to the area in which the individuals are expected to respond, (c) request responses that are convenient to those who must respond and (d) are given in polite non-demanding language. The results of this study are consistent with Geller's findings. The prompts used in this study corresponded with only two of the criteria listed above, the prompts made a specific request or appeal, and they were given in polite non-demanding language. The lack of convenience for those people who were expected to perform the behavior and the large distances between where the
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Prompts were given and where the tutoring sessions took place may have impacted the results of the study. The use of non-contingent prompts (prompts without consequences) in an academic setting were only slightly effective in increasing attendance.

While the results in this study were not dramatic, the results are similar to those achieved in other studies that also used prompts without consequences as an intervention. In a study by Williams, Thyer, Bailey, and Harrison (1989) the use of signs to increase safety belt use increased the behavior from 39.6% to 47.1%. However, combining the sign with a human prompter increased the rate of safety belt use much more dramatically with a 31.4% increase over baseline. In a study by Stock and Milan (1993) the use of non-contingent prompts to increase healthy dietary choices by the elderly showed similar results to those obtained in this study. In this study the use of prompts with the addition of consequences did not have the same effect as in other studies. The addition of tangible reinforcers offered in a lottery and social reinforcers provider through opportunities to serve as a confederate did not increase healthy choices over those observed with prompting and social reinforcement alone. In a study by Witmer and Geller (1976) increasing the amount of recycling performed on a college campus was studied. The interventions consisted of posted fliers as prompts, a raffle, and a contest. Results showed that prompts were the least effective of the interventions used with only slight increases in behavior over baseline for the men and a larger increase in behavior over baseline for the women. Behavior increase with the prompts did not have as dramatic an effect as the raffle and contest interventions.
In addition to the criteria defined by Geller (1982) there are several other reasons why prompts did not work as well in this study as in other studies. The intervention consisted of handing out fliers, class visitations, and e-mail prompts. Due to a lack of funding and faulty equipment at the Academic Skill Center, the correct number of fliers could not be copied. Because of this, there were often students who did not receive any fliers. Another issue was the number of classes actually visited. A total of 99 professors who taught classes that corresponded with the classes where tutoring was provided were contacted, 83 of those professors/instructors responded. Eleven (11) said that they would prefer that no one visits their classroom and 47 responded positively to the request to visit their classroom. A total of 69 classes were visited; this is because some professors taught more than one class. While 69.6% of the classes corresponding to tutoring sessions were visited, the large inequality in the number of each class visited in each discipline resulted in some problems. For example, while all of the Chemistry classes were visited, only one German class was visited (exact percentages listed in the Results section).

The tutoring sessions of Biology and Computer Science were the only disciplines to show a statistical difference in their attendance rates. This difference is largely unexplainable due to the multitude of variables that were in effect concurrently with the intervention. The attendance for these tutoring sessions did increase and stay stable for the duration of the study, which suggests that the intervention did have some effect. Other variables that could have influenced these results include tests or quizzes given in the class and the approach of final week as the semester was ending. Mathematics and Mechanical Engineering also showed increases in the mean number of students
attending the tutoring sessions but showed no statistical difference in the attendance rates. The stability in the attendance numbers for both Biology and Computer Science could be related to the similarity in the classes visited. For Biology only two types of classes were visited (Bios 112 and Bios 211) in Computer Science only three types of classes were visited (CS 105, CS 111, and CS 223). While twelve different Mathematics courses were visited and only one Mechanical Engineering class was visited. The combination of class similarity and a large number of students visited allowed for a relatively large number of students with the same class assignments and schedules to be contacted. This could explain the statistical difference in the areas of Biology and Computer Science.

Another problem encountered was in the distribution of the e-mail lists. When they were passed around they were presented as strictly voluntary; because of this there were many classes where no students signed the e-mail list. In large lecture halls some students did not get the opportunity to sign the list; the class could not be interrupted to ask if everyone had a chance to sign the list.

In all, the response to the prompts was positive. The lateness in the semester did cause some frustration for students who felt they could have used the information sooner. Often professors stated their reason for declining a visit as the lateness in the semester or a conflict in the class schedule such as a test. A question in the e-mail prompts asked if students found the reminder e-mails helpful. The responses were generally positive, some stated they liked the e-mails, but had classes that conflicted with the times of the tutoring sessions (a complete list of the comments can be seen in
Appendix E). Some students asked where they could get information for the next semester about tutoring times and places.

The short time frame of this study limited the amount of data that could be collected and analyzed. The research was started and completed over the course of 15 weeks. If there had been a longer time frame a more powerful intervention could have been developed and implemented. The use of reinforcement, or any intervention that would have required financial assistance from the organization would not have been possible due to the financial constraints of the organization. To achieve a larger increase in attendance the behavior would need to be made contingent on a consequence.

Future research in this area should focus on creating innovative and low cost consequence based interventions. One alternative for the organization in this study would be to start an extra credit system in conjunction with the professors who teach classes for which tutoring is offered. In this way students would receive a consequence such as a potential reinforcer of extra credit or a penalty for not attending tutoring sessions such as losing class points (response cost). The current situation for attending tutoring session which consists of receiving a grade at the end of a semester or after a week or two is much too delayed and uncertain, to be powerful enough to maintain behavior. Further research should also focus on the quality of sessions provided. Professors who had reservations about visitations to their classrooms often stated they did not have a lot of confidence in tutors employed by the organization in the study. One professor stipulated that a volunteer could come to his class, but he would also inform his students about the tutoring offered by his department because he had more faith in it
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than that provided by the organization in the study. Further research on the impact of the availability of tutoring and of the times it is offered would also be beneficial. Students who responded to a question on the effectiveness of the e-mail lists often said the tutoring session were offered at inconvenient times (See Appendix E). Research on these suggestions would provide a better understanding of the problems that are involved with increasing attendance at voluntary tutoring sessions and could perhaps provide solutions to the attendance problems this organization faces.
References


Appendix B

Script for Classes

I. Introduction
"Hello my name is _________" I am here on behalf of the Academic Skill Center to inform you about their services.

II. About it
The Academic Skill Center provides one-on-one, free, drop-in tutoring for many different academic disciplines.

III. Their Class
There is a tutor employed by the academic skill center that is available for drop-in tutor for this class and many others. The tutors are students like yourselves, who have previously taken this class and have done extremely well in it.

IV. Hand-outs
I have a hand-out that tells you about all of the tutoring sessions that are offered, their times and their locations. I will also be handing around an e-mail sign-up sheet. This is Completely Voluntary. If you would like an email reminder about tutoring sessions please place your name and current e-mail address on the sheet.

V. Any Questions?
Are there any questions about what I have just said or about the Academic Skill Center in general?
If you think of any questions later on the phone number for the Academic Skill Center is on the front of your hand-out. They will be happy to answer any of your questions. Thank you for your time."
### Electrical and Computer Systems Engineering Tutoring
Tutor: Uma

<table>
<thead>
<tr>
<th>Courses</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>100, 101, 211, 212, 221, 250, 310, 320</td>
<td>Mondays: 10:00 a.m. – 12:00 p.m.; Tuesdays: 3:00 p.m. – 5:00 p.m.; Wednesdays: 1:00 p.m. – 3:00 p.m.</td>
<td>Dunbar 3201, 3204, 3208</td>
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### Elementary Education Math Tutoring
Tutor: Anna

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<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mondays: 1:00 p.m. – 3:00 p.m.; Tuesdays: 10:00 a.m. – 12:00 p.m.; Wednesdays: 1:00 p.m. – 3:00 p.m.</td>
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### FCL 320 - Business Finance
SI Leader: Prashanth

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<tr>
<td>3:45 p.m. – 5:00 p.m.</td>
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</tbody>
</table>

### FCL 380 – Legal Environment
SI Leader: Andree

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</thead>
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<td>1325 Schneider</td>
</tr>
</tbody>
</table>

### German Tutoring
Tutor: Heidi

<table>
<thead>
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<th>Location</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Tuesdays: 3:00 p.m. – 5:00 p.m.; Thursdays: 10:00 a.m. – 12:00 p.m.</td>
<td>Kohrman 2061, Dunbar 3201, 4021</td>
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### Geol 322 – Oceanography
SI Leader: Steve

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</thead>
<tbody>
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<td>Sangren 3105, 3311, 3105</td>
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</table>

### Math 114 – Excursions in Mathematics
SI Leader: Alaina

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00 p.m. – 3:50 p.m.; 5:30 p.m. – 6:20 p.m.; 3:00 p.m. – 3:50 p.m.</td>
<td>Rood 3307, 3205, 3307</td>
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### Math 374 – Linear Algebra and Differential Equations
SI Leader: Srinivas

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesdays: 11:00 a.m. – 11:50 a.m.; Thursdays: 11:00 a.m. – 11:50 a.m.; Fridays: 11:00 a.m. – 11:50 a.m.</td>
<td>Rood 2271, 2207</td>
</tr>
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</table>

### Mathematics Tutoring
Tutor: Kristen

<table>
<thead>
<tr>
<th>Courses: 109, 110, 111, 114, 116, 118, 122, 123, 200, 230, 272, 314, 364, and 374</th>
<th>Time</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>Mondays: 11:15 a.m. – 12:15 p.m.; Tuesdays: 11:00 a.m. – 1:00 p.m.; Wednesdays: 11:15 a.m. – 12:15 p.m.; Thursdays: 11:00 a.m. – 1:00 p.m.</td>
<td>Sangren 3219, Dunbar 3201, 3211, 3311</td>
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### Mechanical Engineering Tutoring
Tutor: Kartik

<table>
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<tr>
<th>Courses: 220, 232, 250, 256, and 257</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesdays: 9:00 a.m. – 11:00 a.m.; Wednesdays: 9:00 a.m. – 11:00 a.m.; Thursdays: 11:15 a.m. – 1:15 p.m.</td>
<td>Kohrman 2106, Dunbar 4208, 3056</td>
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### Music Tutoring
Tutor: Micah

<table>
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<tr>
<th>Courses: 120, 121, 160, 161, 162, 163, 170, 215, 220, 221, 259, 260, 261, 265, 270, and 271</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mondays: 10:00 a.m. – 10:50 a.m.; Mondays: 5:30 p.m. – 7:30 p.m.; Wednesdays: 10:00 a.m. – 10:50 a.m.; Thursdays: 6:00 p.m. – 8:00 p.m.</td>
<td>Dalton 2002, 2111, 2002</td>
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### Physics Tutoring
SI Leader: Futaba

<table>
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<tr>
<th>Courses: 102, 104, 106, 107, 108, 113, 115, 205, 206, 207, 208, 309, 310, 320, 331, 342, and 352</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mondays: 12:00 p.m. – 12:50 p.m.; Wednesdays: 4:00 p.m. – 4:50 p.m.; Thursdays: 4:00 p.m. – 4:50 p.m.</td>
<td>Sangren 3211, 3214, 3211</td>
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### Spanish Tutoring
Tutor: Karen

<table>
<thead>
<tr>
<th>Courses: All levels</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mondays: 2:00 p.m. – 4:00 p.m.; Tuesdays: 12:00 p.m. – 2:00 p.m.; Wednesdays: 2:00 p.m. – 4:00 p.m.</td>
<td>Henry, Dunbar 3209, 3209</td>
<td></td>
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</table>
### ACTY 210 – Principles of Accounting I

**SI Leader:** Max  
Mondays: 9:00 a.m. – 9:50 a.m.  
Wednesdays: 9:00 a.m. – 9:50 a.m.  
Fridays: 9:00 a.m. – 9:50 a.m.

### ACTY 211 – Principles of Accounting II

**SI Leader:** Nofil  
Mondays: 3:00 p.m. – 3:50 p.m.  
Wednesdays: 3:00 p.m. – 3:50 p.m.  
Fridays: 12:00 p.m. – 12:50 p.m.

### AVS 121 – Aerodynamics and Performance

**SI Leader:** John  
Mondays: 6:00 p.m. – 6:50 p.m.  
Wednesdays: 2:00 p.m. – 2:50 p.m.  
Thursdays: 5:00 p.m. – 5:50 p.m.

### BIOS 112 – Principles of Biology

**SI Leader:** Clare  
Sundays: 4:00 p.m. – 4:50 p.m.  
Tuesdays: 6:00 p.m. – 6:50 p.m.  
Thursdays: 4:00 p.m. – 4:50 p.m.

### BIOS 150 – Molecular and Cellular Biology

**SI Leader:** Jill  
Mondays: 2:00 p.m. – 2:50 p.m.  
Tuesdays: 7:00 p.m. – 7:50 p.m.  
Wednesdays: 2:00 p.m. – 2:50 p.m.

### BIOS 240 – Human Physiology

**SI Leader:** Heather  
Mondays: 1:00 p.m. – 1:50 p.m.  
Tuesdays: 2:00 p.m. – 2:50 p.m.  
Wednesdays: 1:00 p.m. – 1:50 p.m.

### BIOS 250 – General Genetics

**SI Leader:** Debbie  
Mondays: 4:00 p.m. – 4:50 p.m.  
Tuesdays: 2:00 p.m. – 2:50 p.m.  
Wednesdays: 2:00 p.m. – 2:50 p.m.

### Chemistry Tutoring

**Tutor:** Jill  
Courses: 110, 111, 112, 113, 225, 355, 356  
Mondays: 4:00 p.m. – 6:00 p.m.  
Wednesdays: 4:00 p.m. – 6:00 p.m.  
Thursdays: 12:00 p.m. – 2:00 p.m.

### Computer Science Tutoring

**Tutor:** Turkan  
Courses: 105, 111, 112, 223, 224, and 331  
Tuesdays: 11:00 a.m. – 1:00 p.m.  
Thursdays: 11:00 a.m. – 1:00 p.m.  
Mondays: 2:00 p.m. – 3:00 p.m.  
Wednesdays: 2:00 p.m. – 3:00 p.m.

### COM 256 Tutoring

**Tutor:** Meg  
Sundays: 4:00 p.m. – 5:30 p.m.  
Tuesdays: 3:30 p.m. – 5:00 p.m.

### Economics Tutoring

**Tutor:** Ryan  
Courses: 201, 202, 304, 310, 387, 400, 403, 406, 409  
Mondays: 1:00 p.m. – 3:00 p.m.  
Wednesdays: 12:00 p.m. – 2:00 p.m.  
Fridays: 10:00 a.m. – 12:00 p.m.
Date: March 30

To: John Austin, Principal Investigator
Meghan Sadler, Student Investigator for Honors College thesis

From: Michael S. Pritchard, Interim Chair

Re: HSIRB Project Number 01-03-15

This letter will serve as confirmation that your research project entitled “Increasing Attendance at Tutoring Sessions on a Large University Campus” has been received and reviewed by the Human Subjects Institutional Review Board (HSIRB). Based on that review, the HSIRB has determined that approval is not required for you to conduct this research because the participants cannot reasonably be defined as subjects. The committee thanks you for the careful way in which you protect the confidentiality of students and congratulates you on an important project.

A copy of your protocol and a copy of this letter will be maintained in the HSIRB files.
Appendix E

**E-mail Sign up sheet**

If you would like an e-mail reminder of tutoring sessions sent to you please place your e-mail address below.

Class __________________________ Professor __________________________

Location _________________________ Room# __________________________ Time __________________

Days the Class Meets

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Email Messages from Students Regarding the Reminders

This reminder has been very helpful, it lets me know when the tutoring occurs! Thanks

Yes, thank you

They have been helpful, but every time I receive a reminder, during that period of time that tutoring is offered, I have classes.

I like the reminders, thanks.

Yes these reminders have been helpful, unfortunately the review times occur when I have other classes.

I like the reminders, however, the scheduled times were always during my classes. I was only able to go to one, but only because I skipped a class to go to it. the session I did go to was very, very helpful and it was the first test I did well on.

It seems pretty cool and they are great for help. I stay stick with this idea and people will use it.:

I like the reminders of the tutoring sessions. They come in handy because the sheets are not always in sight for the tutoring available. I think most students check their mail often, and it is a good reminder to see in their mailbox.

I thought the email reminders were a very good idea. I wish we could have had this earlier this year.

I don't know your name, but I get your emails about the mech. e. tutoring. I haven't been able to fit them into my schedule yet, but look forward to being able to go soon. please keep me on your list.

thanks,
Mechanical Engineer

I just wanted to answer your question. I do appreciate the reminders. I think that they are a good idea. Thanks a bunch :)

CS 105 student

Yes, the reminders were nice. Thank you.
The reminder letters were very helpful. It just depended on how often I checked my E-mail on weather or not I was aware of the sessions.
I think the emails are great; it's a fast and efficient way to get the information needed.

Yah the emails are great should have done it all semester maybe some people would have done a lot better