UNDERGRADUATE SURVEY

by

Lauren Feldman
Betsy Karamitis

BU-1352-M

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Background Information

Over the years as Biometry and Statistics majors, we have amassed a wealth of information about the Biometry department. This survey is an in depth look at the Biometry and Statistics major from an undergraduate standpoint.

Who was the survey sent to?

The alumni survey was sent to Biometry and Statistics majors who had graduated within the past five years. The undergraduate survey was distributed to freshman, sophomores, juniors, and seniors currently in the Biometry and Statistics major.

How many people responded?

Alumni:	overall sent out:	55
	overall returned:	34
	response rate:	62%
Current:	overall sent out:	59
	overall returned:	35
	response rate:	58%

How were the results summarized?

On a typical survey question, the respondent had a choice of the following responses:

strongly agree **agree** **not sure** **disagree** **strongly disagree**

For each question, the number of responses falling in each response category were tallied. The strongly agree and agree responses were lumped together, and the strongly disagree and disagree responses were lumped together. The number of not sure responses was subtracted from the total number of responses. What we report is the percentage of people who agree and the percentage of people who disagree out of the total number of people who had feelings either way (i.e. out of the number of people who did not answer not sure)

This report is broken down into the following topics:

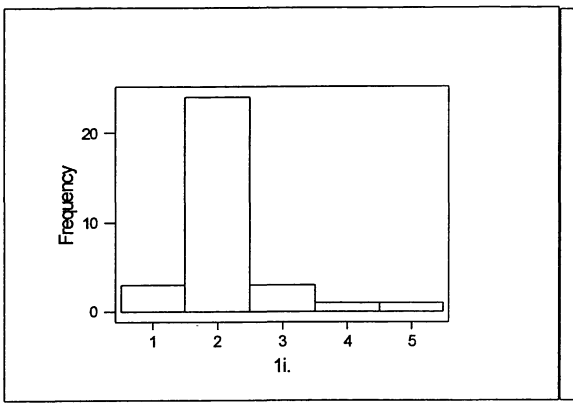
Curriculum
Overlap
Transition from lower level to upper level classes
Biometry 409
Graduate Students
Computing
Statistical Packages
Possible Additions
Careers
Advising

Curriculum

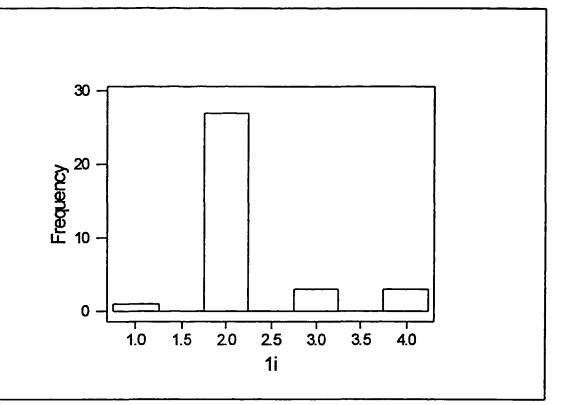
This section does not deal with specific classes, but rather the overall organization of the undergraduate major.

Question: The number of required statistical courses and credits was/is appropriate.

Alumni



Undergraduate



Summary:

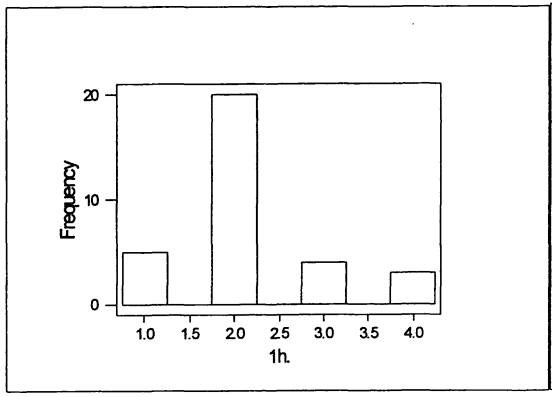
	Agree	Disagree	Not Sure
Alumni	90.3%	9.7%	3
Undergraduate	90.3%	9.7%	3

Comments:

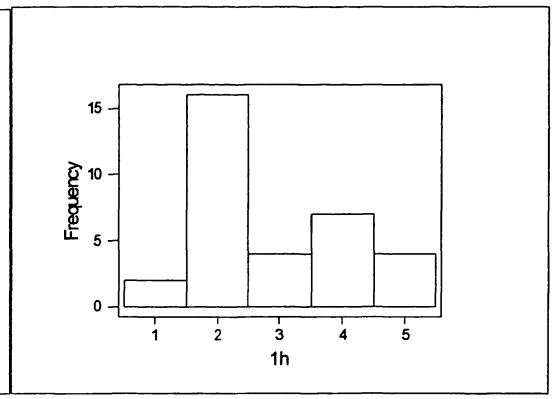
It seems as if the alumni and undergraduates agree on this issue. One person commented that the number of required credits was good because it leaves room in your schedule to take courses in other areas of interest.

Question: My biometry courses were spread appropriately over my years at Cornell.

Alumni



Undergraduate



Summary:

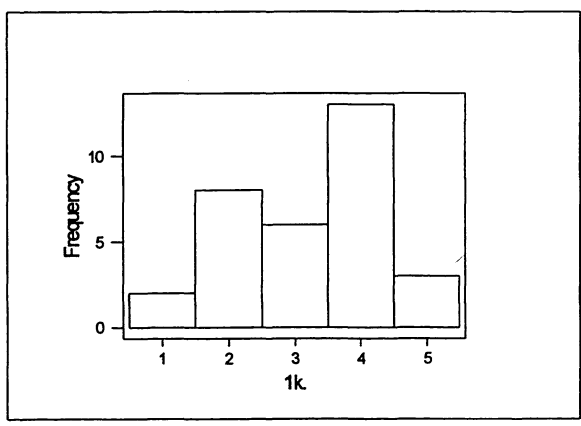
	Agree	Disagree	Not Sure
Alumni	90.0%	10.0%	4
Undergraduate	62.1%	37.9%	4

Comments:

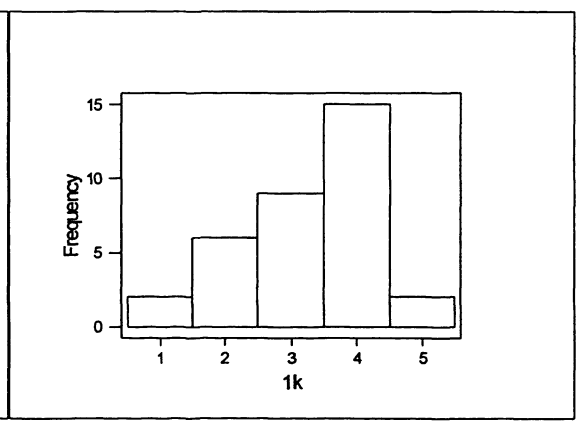
There is a discrepancy here between the alumni responses and the undergraduate responses. This discrepancy is surprising because the curriculum really hasn't changed that much except for the addition of Biometry 102 in 1995.

Question: The order that required statistical classes are taken in should be standardized.

Alumni



Undergraduate



Summary:

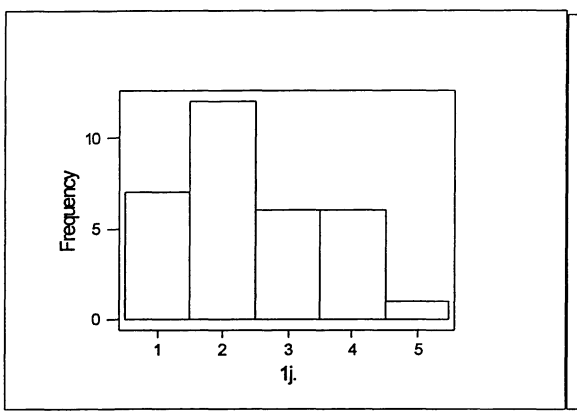
	Agree	Disagree	Not Sure
Alumni	35.7%	64.3%	6
Undergraduate	32.0%	68.0%	9

Comments:

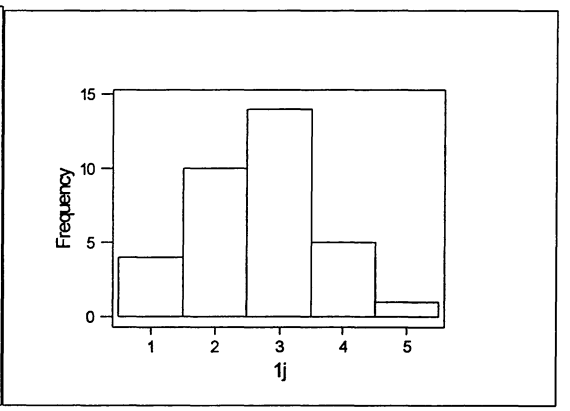
Finding that the majority of both the alumni and the current undergraduates disagree with this statement was surprising. In focus group meetings, people expressed a strong desire to have the order of classes standardized. In addition, student advisors say they are often faced with questions of which of the 408/409 sequence and the 601/602 sequence they should take first.

Question: There should be specific tracks within the major (i.e. computer, math, business, biology)

Alumni



Undergraduate



Summary:

	Agree	Disagree	Not Sure
Alumni	75.0%	25.0%	6
Undergraduate	70%	30%	14

Comments:

While a lot of people were in favor of having specific tracks within the major, people said that entering a track should be optional.

Overlap

Over the years, we have noticed a lot of overlap in some of our courses. This question is aimed at the "problem" of overlap. We wanted to see if all undergraduates felt there was a great deal of overlap and whether this was good or bad.

Question: Was the same material covered in more than one statistics course?

Summary:

	Alumni	Undergraduate
200/215	7	18
215/601	12	2
200/215/601	10	6

Comments:

Basically, a lot of people noticed the overlap between the 200/215/601 series of classes. A large majority of people found that the 200/215 overlap was bad because it was very repetitive. However, people did enjoy the GPA boost. Many people noted that 215 does everything that 200 does except for double blind experiments. Suggestions made were to either combine the classes or make them more different.

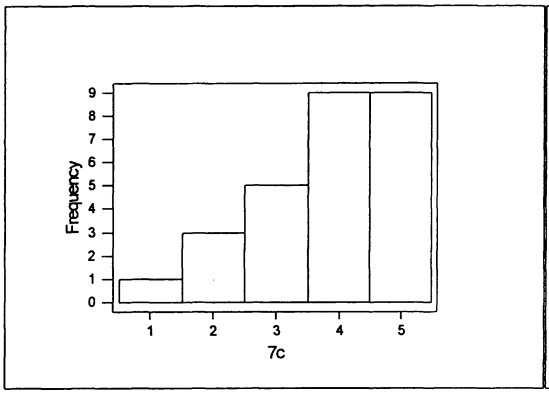
The 215/601 overlap was seen as very good by most of the undergraduates, especially if you take 408/409 in the middle of 215 and 601.

Transition from Lower Level Classes to Upper Level Classes

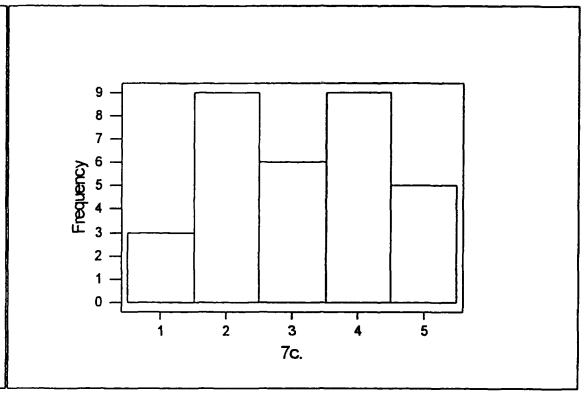
In this case, the lower level classes refer to the Biometry 102, 200, 215 and the upper level classes are Biometry 408, 409, 417, 601, 602, 607.

Question: The transition from the lower level classes to the upper level classes was smooth.

Undergraduate



Alumni



Summary:

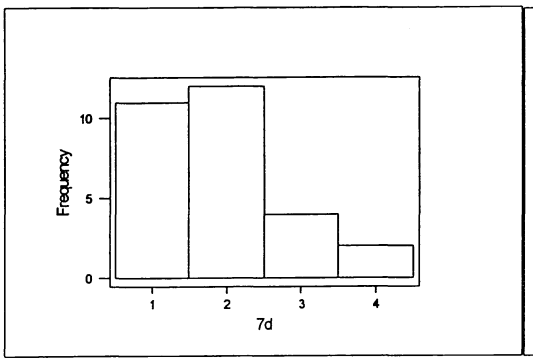
	Agree	Disagree	Not Sure
Alumni	46.2%	53.8%	6
Undergraduate	18.2%	81.8%	5

Comments:

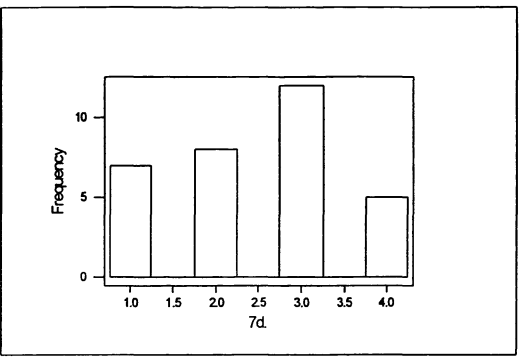
There is a very big discrepancy here. We are not sure why.

Question: A class bridging from the lower level classes to the upper level classes would be a good addition.

Undergraduate



Alumni



Summary:

	Agree	Disagree
Alumni	75%	25%
Undergraduate	92%	8%

Comments:

There were an overwhelming number of comments about this particular topic. It came up in our focus group meeting, throughout the survey, and on the comment sheets at the end of the survey. There was a real push for this class. Students felt they would be better prepared for 408 and 409 if they had an introduction to it earlier. Many commenters felt that it would be a terrific idea and something that would truly benefit the major.

Biometry 409

Question: Which of the following courses, if any, covered material that was at an inappropriate level (too high).

Summary:

Course	# times circled (alumni)	# times circled (undergraduate)	total
Biometry 409	15	17	32
Biometry 408	6	5	11
Biometry 102	1	7	8
Biometry 607	3	1	4
Biometry 417	2	1	3
Biometry 602	3	0	3

Comments:

As you can see, Biometry 409 was the course most selected as being at an inappropriately high level. In fact, Biometry 409 was the topic on the survey that received the most comments. Comments revealed students' deep frustration and anxiety. This frustration and anxiety seemed to stem from the following three characteristics of the course:

1. Lack of Preparation: students were unfamiliar with the material and had trouble making the transition from problems to proofs

2. Graduate Students: students felt they were at an unfair advantage because many of the graduate students had seen the material before and this was their first time seeing it. Also, students said that time in office hours and section were disproportionately spent answering graduate student questions. There were many requests for separate sections, office hours, and grading curves for the graduate and undergraduate students.

3. Size of Class: the size of the class is too big for students to comfortably ask questions during lecture

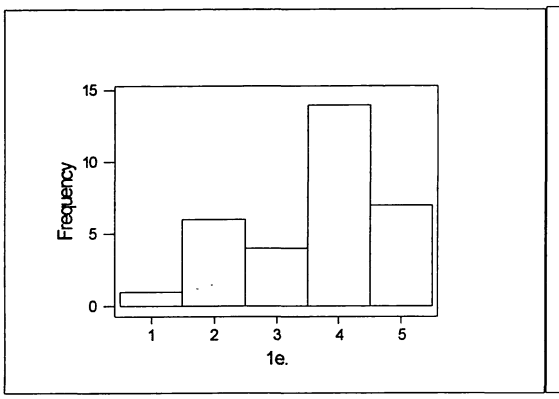
Overall, students found the Biometry 409 experience to be unfavorable. Many offered suggestions on how to improve it. One alternative was to make the course a year long, a second alternative was to tier the course - make a Biometry 309 and Biometry 409, with the upper tier being optional.

Graduate Students

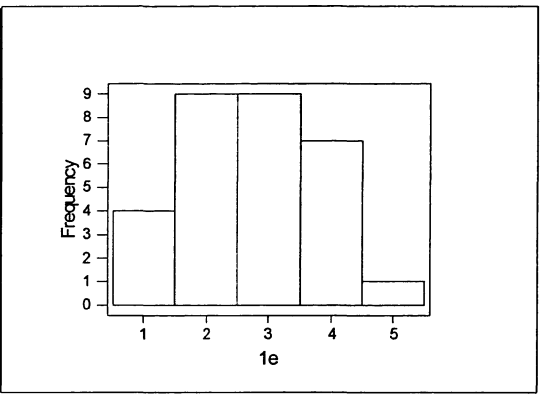
Since biometry major must take numerous courses with graduate students, we were curious about the influence graduate students have, if any, on the undergraduate learning experience.

Question: Taking courses with graduate students hindered my learning.

Alumni



Undergraduate



Summary:

	Agree	Disagree	Not Sure
Alumni	25.0%	75.0%	4
Undergraduate	61.9%	38.1%	9

Comments:

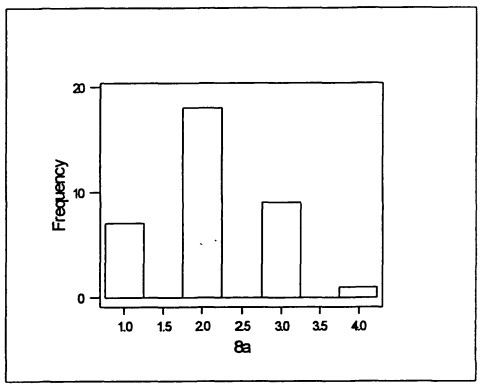
There is quite a discrepancy here between the alumni responses and the undergraduate responses. Perhaps students don't appreciate the graduate perspective until they are out in the workforce, or perhaps some of the alumni respondents are now graduate students themselves. Either way, respondents had both positive and negative things to say about taking courses with graduate students. Some of the positive comments were that graduates offer a different perspective on the material, and that graduate students bring statistical applications into the classroom by talking about their research. Some of the negative comments were that undergraduates feel as if they take a backseat to graduate students, especially in section and office hours. In addition, undergraduates and graduates often have different backgrounds which puts undergraduates at a disadvantage in some cases, and an advantage in others.

Computing

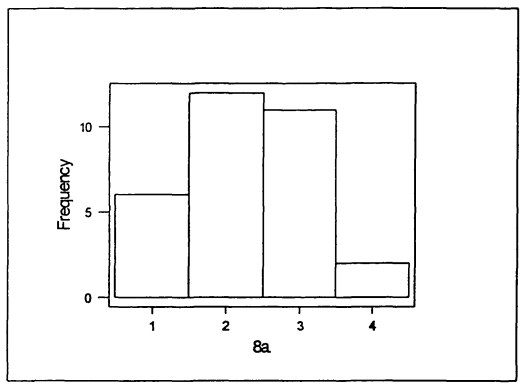
This topic seems to be of interest to many people in the department. Thus we decided to find out what the Undergraduates thought about computing.

Question: Biometry and Statistics majors have greater computing needs than other majors in the College of Agriculture and Life Sciences.

Undergraduate



Alumni



Summary:

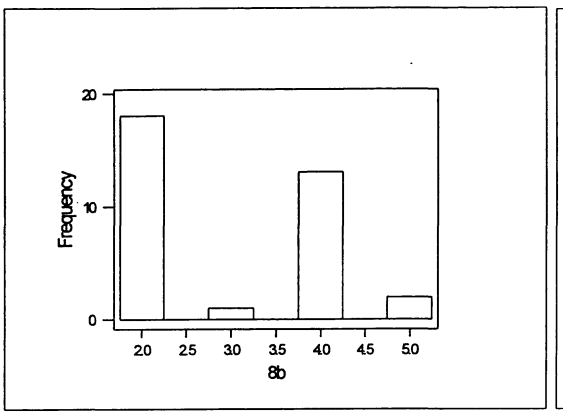
	Agree	Disagree	Not Sure
Alumni	89.5%	10.5%	14
Undergraduate	96.2%	3.8%	9

Comments:

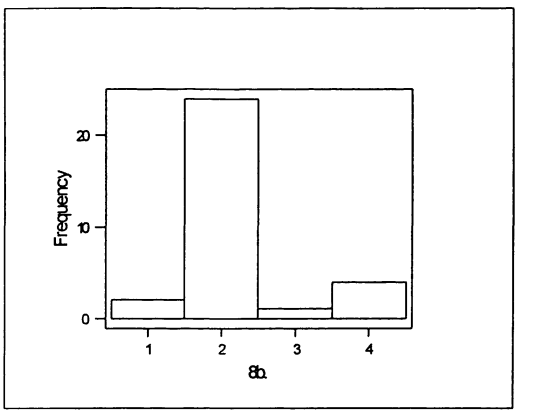
It seems as though many Undergraduates feel that they have greater computing needs than other majors in the College of Agriculture and Life Sciences. It should be noted that there was a large number of people who answered not sure.

Question: There is adequate access to computers on campus.

Undergraduate



Alumni



Summary:

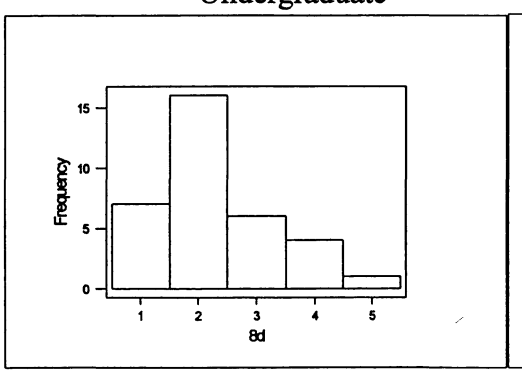
	Agree	Disagree	Not Sure
Alumni	57.1%	42.9%	12
Undergraduate	95.0%	5.0%	14

Comments:

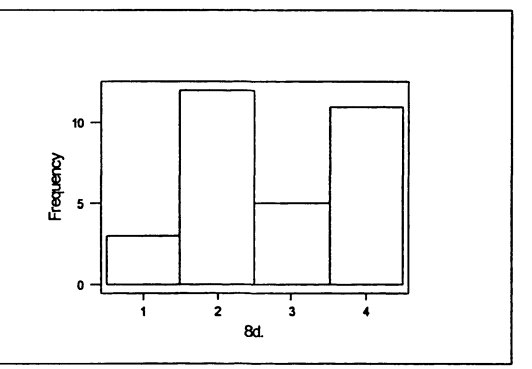
The results are very interesting. When we performed a cross tabulation on the Undergraduates against year, we found that many people began to answer that there was adequate computing after 1995. This may correspond to the building of Stone II Microcomputer lab in Mann Library.

Question: Biometry and Statistics majors should have their own computing facility

Undergraduate



Alumni



Summary:

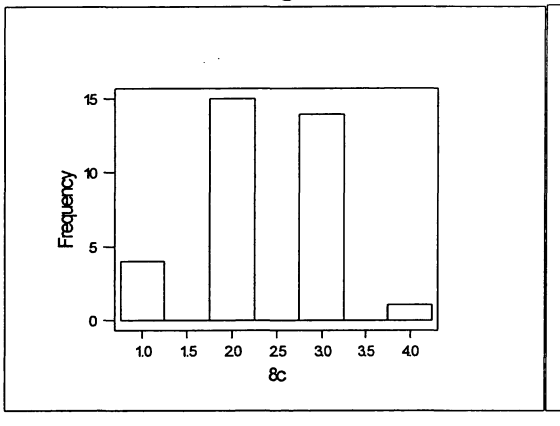
	Agree	Disagree	Not Sure
Alumni	60.7%	39.3%	5
Undergraduate	82.1%	17.9%	6

Comments:

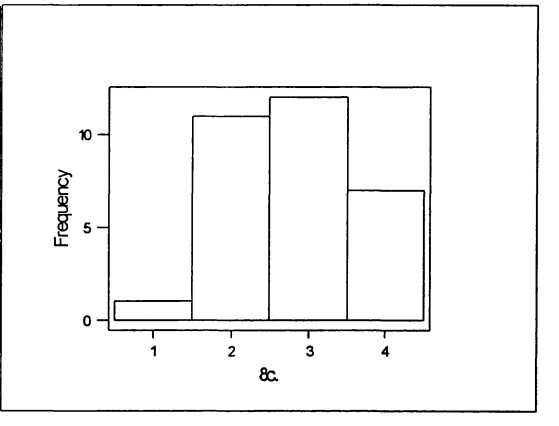
The results to this question are rather surprising. We realize that it takes a lot of money and resources to make this facility, so we came up with an alternative. We think that time should be blocked off in either Warren 160 or Mann Library just for Biometry and Statistics majors to do their work.

Question: Office hours would be more useful if the teaching assistant had a computer right there

Undergraduate



Alumni



Summary:

	Agree	Disagree	Not Sure
Alumni	63.2%	36.8%	12
Undergraduate	95.0%	5.0%	14

Comments:

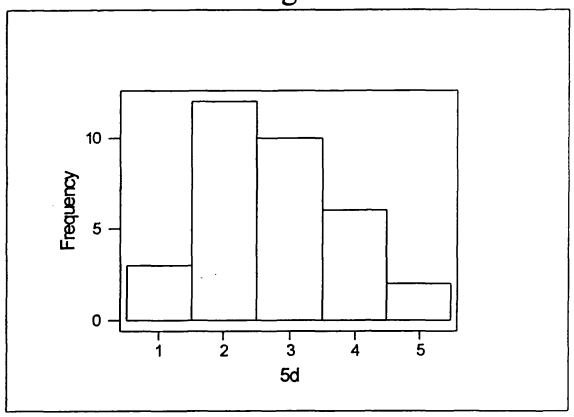
There is a big discrepancy here. This may be because as the years pass the statistical packages become more complex and we are asked to do more computing which we may need a TA's help. It should be noted that a many people answered not sure for this question.

Statistical Packages

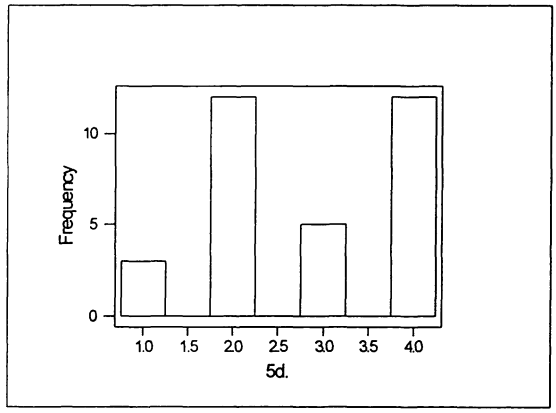
In most of our classes we are expected to use different statistical packages. Also, as Biometry and Statistics majors, we should have an understanding of how different packages work. These questions try to find out if this is in fact the case, and if not, what should be done to eliminate this problem.

Question: I was introduced to enough statistical packages

Undergraduate



Alumni



Summary:

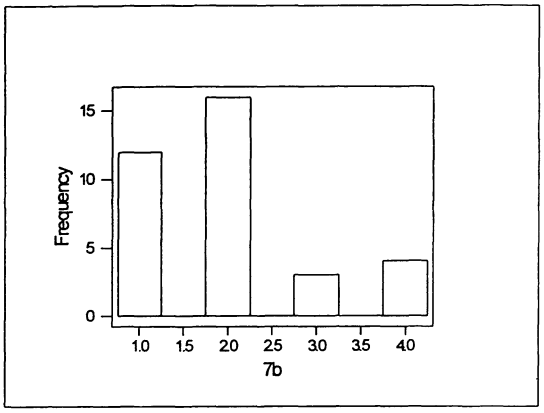
	Agree	Disagree	Not Sure
Alumni	55.2%	44.8%	5
Undergraduate	65.2%	34.8%	10

Comments:

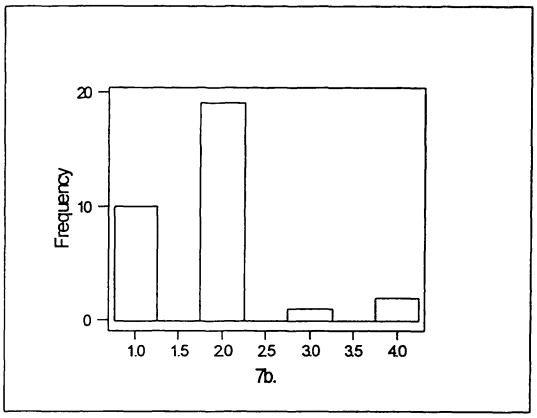
The results appear to be split. The degree to which a student learns statistical packages is based on how much time the student takes to explore the package through tutorials. That may be why some people learned more than others about statistical packages.

Question: A course covering several statistical computing packages would be useful

Undergraduate



Alumni



Summary:

	Agree	Disagree
Alumni	93.9%	6.1%
Undergraduate	87.5%	12.5%

Comments:

There were many positive comments about this particular question. Many of the alumni noted that this would be a marketable skill and that they wished that they had had some type of class like this.

Question: What computer programming languages, if any, do you currently use? (This question was mainly aimed at the alumni)

Summary: The languages that are used by our alumni are:

FORTRAN	7
C	7
SAS	5
SQL	3
Basic	2
Unix	1
Pascal	1
Cobol	1
S+	1
C++	1

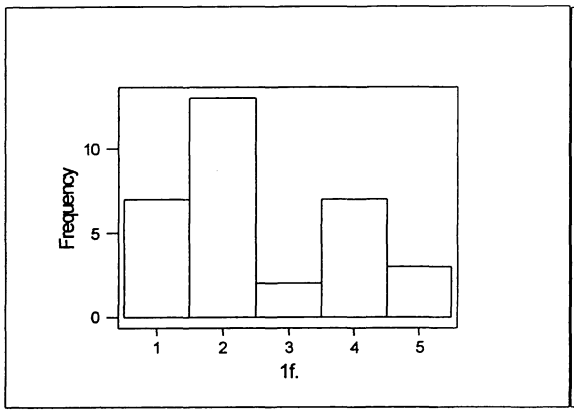
Possible Additions

Careful thought came up with a couple of things that we thought would improve the major namely: a room designated for group work, a one credit seminar for freshman, and increasing the major from 70 undergraduates to 100 undergraduates.

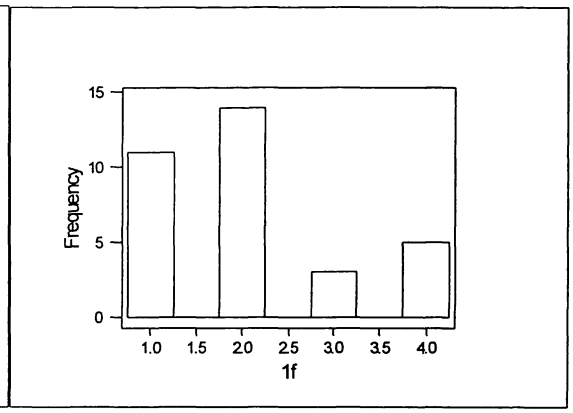
Group work

Question: Group work is/was a major component of my Biometry and Statistics experience.

Alumni



Undergraduate



Summary:

	Agree	Disagree	Not Sure
Alumni	62.5%	37.5%	2
Undergraduate	83.3%	16.7%	3

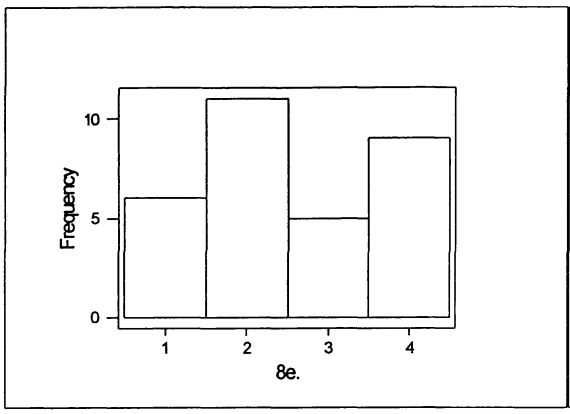
Comments:

Group work does seem to be a major component of the undergraduate experience, perhaps more now than in previous years

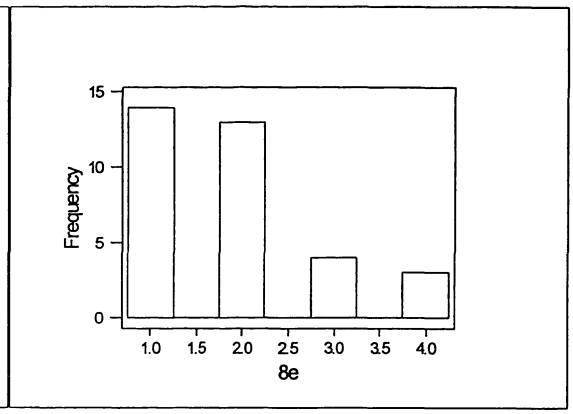
Question: I would benefit from a room designated for group work.

Summary:

Alumni



Undergraduate



	Agree	Disagree	Not Sure
Alumni	65.4%	34.6%	7
Undergraduate	90.0%	10.0%	4

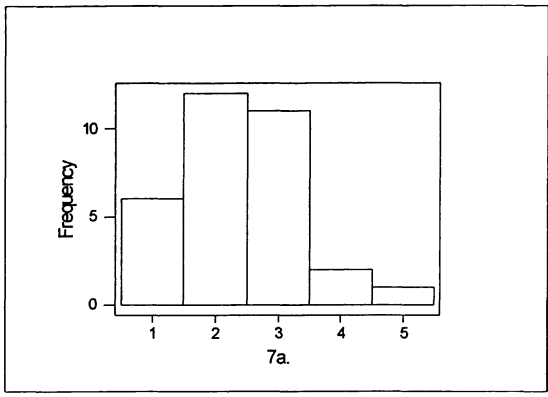
Comments:

It makes sense that if group work is a major component of the Biometry experience, then having a room designated for group would be a benefit to many. People could use this room to work on problem sets, projects, and research. Perhaps it could be the same room where all TA office hours could be held.

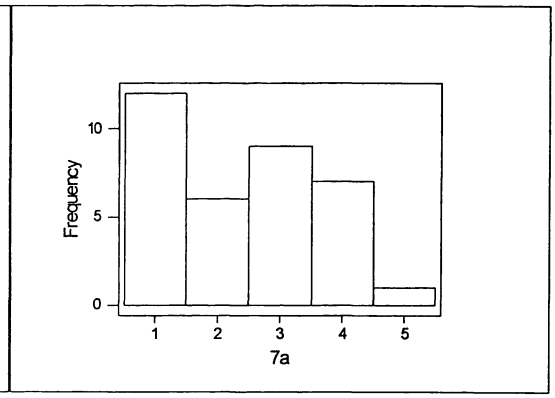
One credit seminar

Question: A one credit seminar introducing the Biometry and Statistics major would be a good addition.

Alumni



Undergraduate



Summary:

	Agree	Disagree	Not Sure
Alumni	73.9%	26.1%	11
Undergraduate	69.2%	30.8%	9

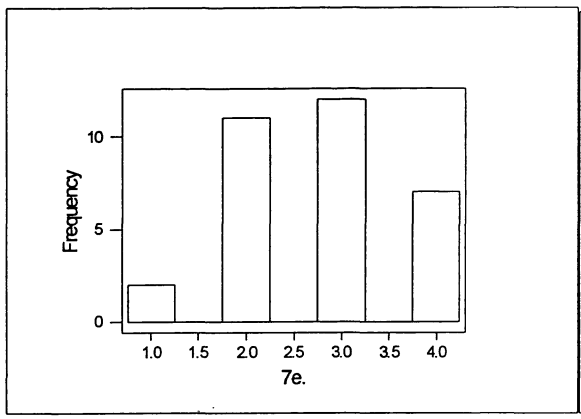
Comments:

You may be wondering what exactly we have in mind for this one credit seminar. Ideally, this seminar would be offered to incoming freshman and transfer students. It would meet once a week for about an hour. In addition to learning about the undergraduate Biometry major, students would also become familiar with their professors and the other students in the major, improving group cohesiveness.

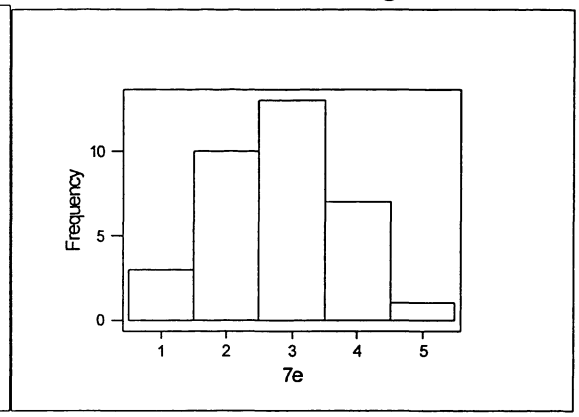
Increasing the number of students in the undergraduate major

Question: Currently there are 70 undergraduates in the major; this should be increased to 100 (We now have seven professors with an eighth expected in the fall)

Alumni



Undergraduate



Summary:

	Agree	Disagree	Not Sure
Alumni	68.2%	31.8%	12
Undergraduate	61.9%	38.1%	13

Comments:

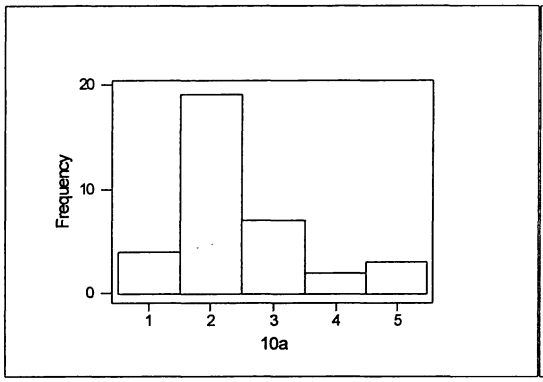
One thing to notice for this question is that there are a lot of not sures. People did not want the size of the undergraduate major increased just for the sake of making it bigger. Rather, if there are that many more qualified candidates, why not let them in.

Careers

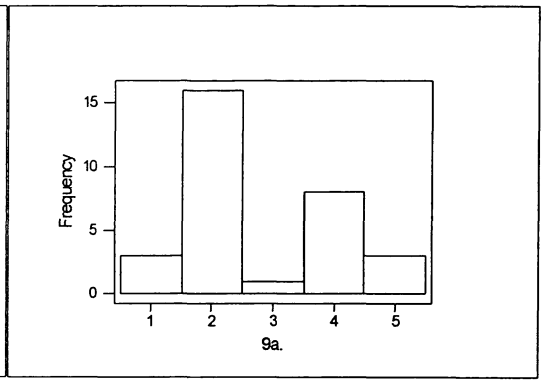
Biometry and Statistics majors have a lot of options open to them after they graduate. However, many people go through the major confused as to what they should do when they graduate. Thus this section was intended to find out if there is confusion and what aspects of the career search should be addressed.

Question: I know that a lot of options are open to me.

Undergraduate



Alumni



Summary:

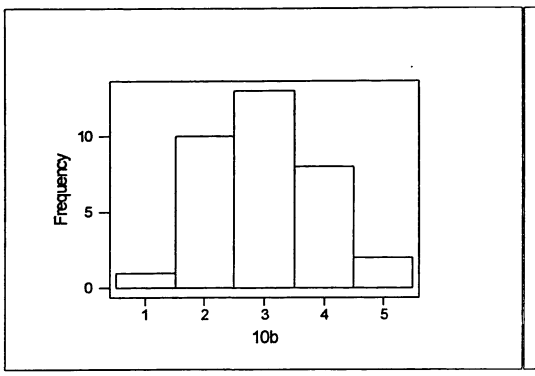
	Agree	Disagree	Not Sure
Alumni	62.5%	37.5%	1
Undergraduate	82.1%	17.9%	7

Comments:

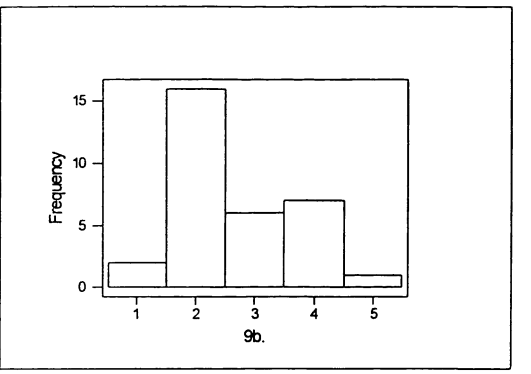
Well, it seems like more current Undergraduates are seeing that there are a lot of options open to them. Thus, it appears that we are doing a better job of letting undergraduates know that they have a lot of career options open to them.

Question: The resources available at Cornell were/are adequate for my career search.

Undergraduate



Alumni



Summary:

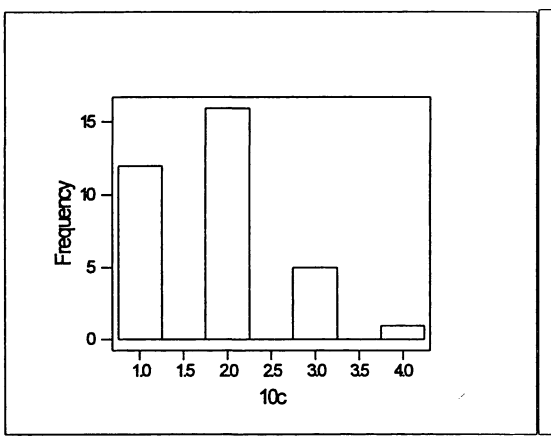
	Agree	Disagree	Not Sure
Alumni	70.4%	29.6%	7
Undergraduate	52.4%	47.6%	13

Comments:

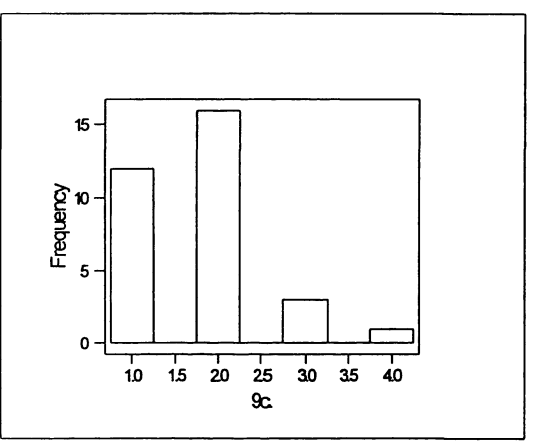
There were a lot of comments here that wished that the department or the career services at Cornell offered more information about the actuarial profession.

Question: I would have benefited from talking to recent graduates about their experiences.

Undergraduate



Alumni



Summary:

	Agree	Disagree
Alumni	96.7%	3.3%
Undergraduate	96.6%	3.4%

Comments:

This question had an overwhelmingly positive response. It seems as though the undergraduates would like to speak to recent grads. The next question in all of our minds is - Should we start recruiting people now?

Question: What is your current occupation?

Careers of Alumni

Actuary:	11
Business / Investment:	6
Computer Consultant:	4
Grad School / Business School:	3
Human Resources:	2
Teacher:	2
Pharmaceutical:	1
Development Specialist:	1
Housewife:	1
No Occupation:	1

Comments:

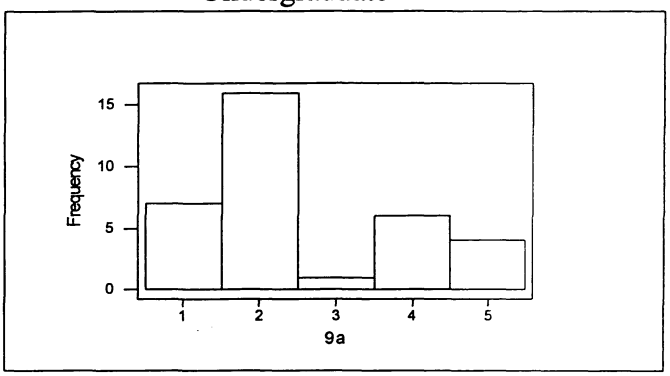
The survey shows that a lot of people are going into the actuarial field. This is evidence that the department should offer more information.

Advising

Both our faculty and our student advisors are great sources of information for the Undergraduates. Thus, we wanted to see how the Undergraduates felt about their advisor. This question was only asked to our current undergraduates.

Question: My faculty advisor is available to me when I have questions.

Undergraduate

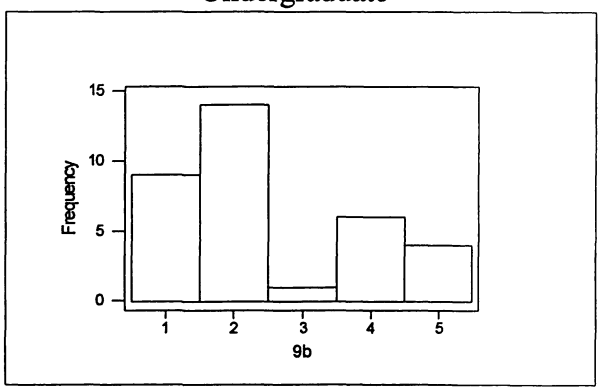


Summary:

	Agree	Disagree
Undergraduate	69.7%	30.3%

Question: My faculty advisor makes an effort to get to know me.

Undergraduate

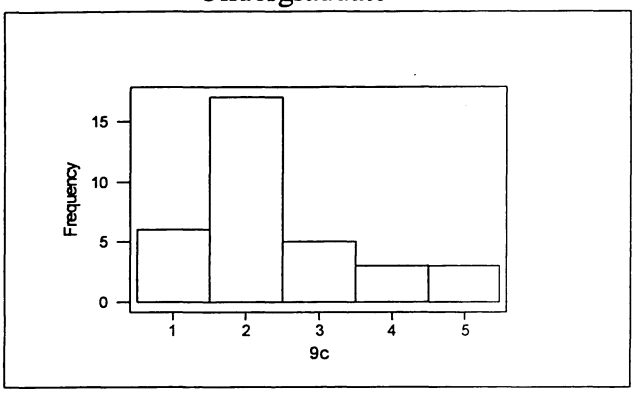


Summary:

	Agree	Disagree
Undergraduate	69.7%	30.3%

Question: My faculty advisor gives me sound advice.

Undergraduate



Summary:

	Agree	Disagree
Undergraduate	79.3%	20.7%

Comments:

The information tells us a couple of things. On a whole it seems as though the faculty advisors are doing a good job. It seems through the comments on the survey that the students who disagreed seemed to have a personality conflict with their advisor. We feel that if this is the case, it should be made very clear that anyone can switch faculty advisors if they are not happy.

Student Advising

The same questions were asked about student advisors, but we only had four respondents to these questions. However, many people commented that student advising was a great idea and that they wished that they had had one.