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Proposal Number: MATH 3-30-12a

JUL 10 2012

UNC CHARLOTTE

Proposal Title: Establishment of a Minor in Statistics

College of Liberal
Arts and Sciences

Originating Department: Department of Mathematics and Statistics

TYPE OF PROPOSAL: UNDERGRADUATE XX GRADUATE _____ UNDERGRADUATE & GRADUATE _____
(Separate proposals sent to UCCC and Grad. Council)

DATE RECEIVED	DATE CONSIDERED	DATE FORWARDED	ACTION	SIGNATURES
			Approved	<u>DEPARTMENT CHAIR</u> Alan Dow, Mathematics & Statistics
		2/01/13	Approved	<u>COLLEGE CURRICULUM COMMITTEE CHAIR</u> [print name here]
		2/01/13	Approved	<u>COLLEGE FACULTY CHAIR (if applicable)</u> [print name here]
		2/6/13	Approved	<u>COLLEGE DEAN</u> [print name here] C. BRADY
			Approved	<u>GENERAL EDUCATION</u> (for General Education courses) [print name here]
			Approved	<u>UNDERGRADUATE COURSE & CURRICULUM COMMITTEE CHAIR</u> (for undergraduate courses)
			Approved	<u>GRADUATE COUNCIL CHAIR</u> (for graduate courses)
			Approved	<u>FACULTY GOVERNANCE ASSISTANT</u> (Faculty Council approval on Consent Calendar)
				<u>FACULTY EXECUTIVE COMMITTEE</u> (if decision is appealed)



UNC CHARLOTTE

LONG FORM COURSE AND CURRICULUM PROPOSAL

*To: *Rick Lejk, Chair of UCCC*

From: Kim Harris & Bob Anderson
Co-chairs, Curriculum Committee
Department of Mathematics and Statistics

Date: June 26, 2012

Re: Proposal for new Minor in Statistics

New Undergraduate

Course and Curriculum Proposal from Department of Mathematics and Statistics

ESTABLISHMENT OF A MINOR IN STATISTICS

II. CONTENT OF PROPOSALS

A. PROPOSAL SUMMARY

The Mathematics and Statistics Department proposes to establish a Minor in Statistics which will require five classes from the Mathematics and Statistics Department and one statistics-related class from the student's major department. .

The proposed Statistics Minor has the following requirements:

1. One of MATH 1120, MATH 1121, MATH 1241
2. One of MATH 2120, MATH 2241
3. One of STAT 1220, STAT 1221, STAT 1222, STAT 2122
4. STAT 2223
5. One of STAT 3110, STAT 3140, STAT 3150, STAT 3160
6. One course from among the following based on the student's major: BINF 2121, CJUS 3101, COMM 3100, ECON 3112, OPER 3206, POLS 2220, PSYC 3140, HLTH 3104, SOCY 4156, SOWK 3100

B. JUSTIFICATION

1. **Need:** There is no minor in statistics available at UNC Charlotte. Students who are majors in mathematics have the option to choose a concentration in statistics. Students outside the math major have no opportunities that either encourage or recognize a continued study of statistics.

2. **Prerequisites:** The prerequisites for the upper-level statistics courses offered by the Department of Mathematics and Statistics are included as requirements for the program. For example, a second semester of calculus (MATH 2120 or MATH 1242) which is a prerequisite for STAT 2122 is a requirement for the minor. In addition, any math or statistics courses that are prerequisites for the statistics-related courses taught in other departments are included as

requirements for the program. For example, MATH 1120 which is a prerequisite for ECON 3112 satisfies the requirement in the minor for one semester in differential calculus.

3. **Course Numbering:** This proposal requires no new courses so there are no changes in course numbering.

4. **Improve Programs:** Many departments on campus already require Statistics and Mathematics courses as part of their requirements for their major or concentrations or as prerequisites for required classes. The demands of these disciplines are increasingly reliant on a significant knowledge of Statistics. The Statistics Minor is a natural option for students who want to enhance their education and make their academic records more appealing to employers. The minor will be of particular interest to students going on to graduate school in these disciplines.

C. IMPACT

1. **Students Served by the Proposal:** The Statistics Minor is directed towards students in Bioinformatics, Criminal Justice, Communications, Economics, Business Information Systems and Operations Management, Political Science, Psychology, Public Health, Social Work, and Sociology. Each of these majors requires a statistics-related course for their students that is offered in their discipline. We wanted to create a minor that builds on the math and statistics courses that students are already required to take for their major and that would help students make connections between statistics and their major.

2. **Effect on Existing Courses:**

- a. There are no new courses proposed for this minor.
- b. The content and frequency of courses offered will not be affected. The new minor consists of five classes from the Mathematics and Statistics Department and one class from the student's major department. Since the sixth course is already offered on a regular basis to majors in these departments, these departments do not anticipate a change in the frequency of course offerings nor the number of sections of each course offered. The course from the student's major has a Statistical emphasis and any Mathematics and Statistics prerequisites are already required as part of the Major. The required courses for this minor were chosen specifically to allow students to apply required courses from their major towards the minor.
- c. There are no new courses proposed.
- d. We anticipate that enrollment will be affected only for some of the courses within the Department of Mathematics and Statistics. These courses are: MATH 2120, STAT 2223, STAT 3110, STAT 3140, STAT 3150, and STAT 3160. MATH 1120 may also be impacted but not significantly. The frequency of these courses will not need to change, and while the enrollment may increase we do not anticipate the need for additional sections.
- e. None of these courses have been offered as Topics courses.
- f. No other areas of the catalog are affected.

III. RESOURCES REQUIRED TO SUPPORT PROPOSAL.

None. It is anticipated that no new resources are required since no new courses are involved and none of the current courses being taught will require more sections.

IV. CONSULTATION WITH THE LIBRARY AND OTHER DEPARTMENTS OR UNITS

A. LIBRARY CONSULTATION

The research librarian for the Department of Mathematics and Statistics indicates that no new holdings are required to implement this proposal. The consultation is attached.

B. CONSULTATION WITH OTHER DEPARTMENTS OR UNITS

The following departments were consulted.

1. Bioinformatics
2. Communication Studies
3. Criminal Justice
4. Economics
5. Business Information Systems and Operations Management
6. Political Science
7. Psychology
8. Public Health
9. Social Work
10. Sociology

The responses were uniformly supportive of the proposal with the statement that only students in their major take the course listed as an option from their department.

V. INITIATION, ATTACHMENTS AND CONSIDERATION OF THE PROPOSAL

A. ORIGINATING UNIT

The idea for a minor in Statistics that would build on the required courses for students in other majors was enthusiastically supported by the entire department. Members of the Statistics group in the department proposed the required courses for the minor. The proposal was unanimously approved by the department's course and curriculum committee on March 30, 2012.

B. ATTACHMENTS

1. Consultation Letters from Other Units
 - A. Dr. Larry Mays, Bioinformatics
 - B. Dr. Cem Saydam, Business Information Systems and Operations Management
 - C. Dr. Shawn Long, Communication Studies
 - D. Dr. Beth Bjerregaard, Criminal Justice and Criminology
 - E. Dr. Jennifer Troyer, Economics
 - F. Dr. Bob Kravchuk, Political Science
 - G. Dr. Fary Cachelin, Psychology

- H. Dr. Vivian Lord, Public Health Sciences
- I. Dr. Dennis Long, Social Work
- J. Dr. Lisa Walker, Sociology
- K. Consultation from Library
- L. Subsequent letters from supporting departments concerning coursework that will count towards both the major and the minor.

2. No course outlines are attached.
3. No syllabi are attached.
4. The Proposed Catalog Copy is attached.
5. The proposed minor will not impact an existing Academic Plan of Study.

Consultation Letters

Anderson, Robert

From: Mays, Larry
Sent: Tuesday, April 24, 2012 9:13 PM
To: Anderson, Robert
Subject: Re:

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Dear Bob,

I am very supportive of this proposal. As for using BINF 2121 "Statistical Bioinformatics" as a selective, I think this could work well. It seems that what you are going for is a set of credit hours dedicated to domain specific applications of statistics. This is definitely what BINF 2121 is intended to be. The only caveat is the BINF 1101 pre/co-requisite which I think in this case has to be enforced since a rudimentary understanding of bioinformatics data will be necessary to demonstrate the constraints and limitations this type of data places on statistical analysis. BINF 1101 is pretty elementary, so I don't think it will be a burden.

Larry

From: <Anderson>, Robert <rfanders@uncc.edu>
Date: Tuesday, April 24, 2012 2:21 PM
To: Lawrence Mays <lemays@uncc.edu>
Subject: <no subject>

Lawrence Mays Bioinformatics

The Mathematics and Statistics is in the preliminary stages of proposing a Statistics Minor. Many majors have at least one Stat class as a requirement for its degree. The design of the minor is based on these courses. The design of the minor includes one course selected from list made up from courses with a Statistical emphasis selected from these majors. From the Bioinformatics classes we identified BINF 2121 as an appropriate course. We are writing to seek your input as to whether or not this is, or others, is a suitable choice, and additionally you would support the proposal. . Below is the initial plan for the Statistics Minor

1. One of MATH 1120, MATH 1121, MATH 1241
2. One from MATH 2120, MATH 2241
3. One from STAT 1220, STAT 1221, STAT 1222, Stat 2122
4. STAT 2223
5. ONE from STAT 3110, STAT 3140, STAT 3150, STAT 3160

6. One from BINF 2121, CJUS 3101, COMM 3100, ECON 3122, ECON 3114, ECON 3125, OPER 3202, POLS 2220, PSYC 3140, PSYC 4140, HLTH 3104, SOWK 3100, SOCY 4155, SOCY 4156

Bob Anderson

Dept of Math and Stat

Anderson, Robert

From: Saydam, Gem
Sent: Friday, May 04, 2012 3:04 PM
To: Anderson, Robert
Cc: Kerr, Daryl
Subject: RE: Clarification Stat Minor

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Bob,

BISOM Department fully support the inclusion of OPER 3206 which we think fits better with the Stat Minor. Statistical quality control is about 65% of the contents of this course.

OPER 3206. Quality Assurance and Management. (3) Prerequisites: OPER 3100 with a grade of C or above. A study of management philosophy, practices and analytical processes implemented in quality planning and administration of products and services. Topics include corporate culture, quality design, human factors and motivation, quality cost analyses and auditing, service quality, quality assurance, quality circles, and conformance to design. *(Spring)*

Best wishes,

Cem

Cem Saydam, Ph.D. | Chair | Professor of Operations Management
UNC Charlotte | Dept. of BIS and Operations Management
9201 Univ City Blvd. | Charlotte | NC 28223
Phone: 704-687-7616 | Fax: 704-687-6330
saydam@uncc.edu | <http://www.uncc.edu>

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From: Anderson, Robert
Sent: Wednesday, April 25, 2012 4:33 PM
To: Saydam, Gem
Subject: Clarification Stat Minor

A clarification seems to be needed. The intent of the Stat Minor is to encourage students in your major to upgrade their statistics background. We are not seeking permission for stat minor students to take say BINF 2121, CJUS 3101, COMM 3100, etc., we are looking to entice your majors to add a stat minor because one of their major courses will count towards the minor. We have no thought whatever that students pursuing a stat minor should be permitted to take a course that they were not otherwise eligible to take. Thanks to those who have already responded and we are looking forward to those who have not yet had time. Bob Anderson Dept of Math and Stat

Anderson, Robert

From: Long, Shawn
Sent: Wednesday, April 25, 2012 4:36 PM
To: Anderson, Robert
Cc: Leeman, Carol
Subject: RE:

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Bob,

Thank you for the clarification. Given the nature of our course with a pre-req in Communication Theory it may not have been the most appropriate course for your students. However, your subsequent clarification sets that straight. I think some of our students may be interested in upgrading their statistics background, particularly those who double major in Comm Studies/Psychology. I fully support this proposal.

Shawn

A clarification seems to be needed. The intent of the Stat Minor is to encourage students in your major to upgrade their statistics background. We are not seeking permission for stat minor students to take say BINF 2121, CJUS 3101, COMM 3100, etc., we are looking to entice your majors to add a stat minor because one of their major courses will count towards the minor. We have no thought whatever that students pursuing a stat minor should be permitted to take a course that they were not otherwise eligible to take. Thanks to those who have already responded and we are looking forward to those who have not yet had time. Bob Anderson Dept of Math and Stat

From: Anderson, Robert
Sent: Tuesday, April 24, 2012 2:25 PM
To: Long, Shawn
Subject:

Shawn Long Communications

The Mathematics and Statistics is in the preliminary stages of proposing a Statistics Minor. Many majors have at least one Stat class as a requirement for its degree. The design of the minor is based on these courses. The design of the minor includes one course selected from list made up from courses with a Statistical emphasis selected from these majors. From the Bioinformatics classes we identified COMM 3100 as an appropriate course. We are writing to seek your input as to whether or not this is, or others, is a suitable choice, and additionally you would support the proposal. Below is the initial plan for the Statistics Minor

1. One of MATH 1120, MATH 1121, MATH 1241
2. One from MATH 2120, MATH 2241
3. One from STAT 1220, STAT 1221, STAT 1222, Stat 2122

4. STAT 2223

5. ONE from STAT 3110, STAT 3140, STAT 3150, STAT 3160

6. One from BINF 2121, CJUS 3101, COMM 3100, ECON 3122, ECON 3114, ECON 3125, OPER 3202, POLS 2220, PSYC 3140, PSYC 4140, HLTH 3104, SOWK 3100, SOCY 4155, SOCY 4156

Bob Anderson

Dept of Math and Stat

Anderson, Robert

From: Bjerregaard, Beth
Sent: Tuesday, May 01, 2012 4:36 PM
To: Anderson, Robert
Subject: Re: Stat Minor

Follow Up Flag: Follow up
Flag Status: Flagged

I'm sorry – overwhelmed in Colvard. With your explanation that the Statistics Minors will not be trying to take CJUS3101 (a restricted course), I am supportive of this proposal. Beth

Beth Bjerregaard, Ph.D. | Professor & Chair
UNC Charlotte | Department of Criminal Justice & Criminology
9201 University City Blvd. | Charlotte, NC 28223-0001
Phone: 704-687-0738 | Fax: 704-687-5285 *NOTE NEW NUMBERS
bebjerre@uncc.edu | <http://criminaljustice.uncc.edu/>

From: "Anderson, Robert" <rfanders@uncc.edu>
Date: Tue, 1 May 2012 14:19:28 -0400
To: Microsoft Office User <bebjerre@uncc.edu>
Subject: Stat Minor

Beth Bjerregaard Criminal Justice

The Mathematics and Statistics is in the preliminary stages of proposing a Statistics Minor. Many majors have at least one Stat class as a requirement for its degree. The design of the minor is based on these courses. The design of the minor includes one course selected from list made up from courses with a Statistical emphasis selected from these majors. From the Bioinformatics classes we identified CJUS 3110 as an appropriate course. We are writing to seek your input as to whether or not this is, or others, is a suitable choice, and additionally you would support the proposal. .

Below is the initial plan for the Statistics Minor

1. One of MATH 1120, MATH 1121, MATH 1241
2. One from MATH 2120, MATH 2241
3. One from STAT 1220, STAT 1221, STAT 1222, Stat 2122
4. STAT 2223
5. ONE from STAT 3110, STAT 3140, STAT 3150, STAT 3160
6. One from BINF 2121, CJUS 3101, COMM 3100, ECON 3122, ECON 3114, ECON 3125, OPER 3202, POLS 2220, PSYC 3140, PSYC 4140, HLTH 3104, SOWK 3100, SOCY 4155, SOCY 4156

The intent of the Stat Minor is to encourage students in your major to upgrade their statistics background. We are not seeking permission for stat minor students to take say BINF 2121, CJUS 3101, COMM 3100, etc., we are looking to entice your majors to add a stat minor because one of their major courses will count towards the minor. We have no thought whatever that students pursuing a stat minor should be permitted to take a course that they were not otherwise eligible to take. Thanks to those who have already responded and we are looking forward to those who have not yet had time.
Bob Anderson Dept of Math and Stat

Anderson, Robert

From: Troyer, Jennifer
Sent: Friday, April 27, 2012 10:04 AM
To: Anderson, Robert
Subject: FW: stat minor

Bob,

Please find a summary of the discussion regarding the Statistics Minor from the Department of Economics Undergraduate Curriculum Committee in the email shown below.

In sum, while the Department of Economics strongly supports the minor, there are two key caveats. First, the Department of Economics believes that the only appropriate course for the Stat Minor from Economics is ECON 3112 (Econometrics I). ECON 3112 is required for all Economics majors. The other courses (ECON 3122, ECON 3114, ECON 3125) are either not currently offered (ECON 3114) or do not contain enough statistics content to fit well in the minor (ECON 3122 or ECON 3125). Second, our ECON 3112 course fills up every time it is offered, and we do not currently have the capacity to take on more students in that course. Our understanding is that the Stat Minor would not result in students majoring in Statistics taking ECON 3112. If we are mistaken about this assumption, it would change our level of support for the proposal.

Best of luck as you move forward with the proposal.

Regards-

Jennifer

From: Tseng, Hui-Kuan
Sent: Thursday, April 26, 2012 1:51 PM
To: Troyer, Jennifer
Cc: Madsen, Ron; Sewell, Ellen; Stivender, Carol; Swartz, Caroline
Subject: stat minor

Jennifer

The UCC has discussed (over the email) the request from the department of math and stat about their stat minor. Although we like their proposal which encourages our econ major to consider a stat minor, we have following concerns:

1. We (including you) feel ECON 3112 is the only appropriate course which fits as applied statistics.
2. If their stat minors try to sign up for our ECON 3112, we simply do not have seats for them.

If you would like to meet with us to further discuss about their request, please let me know.

Regards,

Alice

Anderson, Robert

From: Kravchuk, Bob
Sent: Thursday, April 26, 2012 8:41 AM
To: Anderson, Robert
Subject: RE: Stat Minor Clarification

Dear Bob:

That is how I interpreted your earlier message.

Yes, more stats would be a wonderful idea for our POLS majors.

We shall encourage students to take as much as they can.

Cheers,

-Bob Kravchuk

From: Anderson, Robert
Sent: Wednesday, April 25, 2012 4:33 PM
To: Kravchuk, Bob
Subject: Stat Minor Clarification

A clarification seems to be needed. The intent of the Stat Minor is to encourage students in your major to upgrade their statistics background. We are not seeking permission for stat minor students to take say BINF 2121, CJUS 3101, COMM 3100, etc., we are looking to entice your majors to add a stat minor because one of their major courses will count towards the minor. We have no thought whatever that students pursuing a stat minor should be permitted to take a course that they were not otherwise eligible to take. Thanks to those who have already responded and we are looking forward to those who have not yet had time. Bob
Anderson Dept of Math and Stat

Anderson, Robert

From: Cachelin, Fary
Sent: Tuesday, April 24, 2012 3:27 PM
To: Anderson, Robert
Subject: RE: Stat Minor

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Bob,

We are in support of the proposal. PSYC 3140 (Assessment) is a great choice and usually has open seats. We haven't offered PSYC 4140 (Tests and Measurements) for a number of years, and cannot guarantee that it would be offered again at any time in the future.

Best,

Fary

Professor & Chair
Department of Psychology
UNC Charlotte
9201 University City Blvd.
Charlotte, NC 28223
Tel: (704) 687-1319
Fax: (704) 687-1317

From: Anderson, Robert
Sent: Tuesday, April 24, 2012 2:38 PM
To: Cachelin, Fary
Subject: Stat Minor

Fary Cachelin Psychology

The Mathematics and Statistics is in the preliminary stages of proposing a Statistics Minor. Many majors have at least one Stat class as a requirement for its degree. The design of the minor is based on these courses. The design of the minor includes one course selected from list made up from courses with a Statistical emphasis selected from these majors. From the Bioinformatics classes we identified PSYC 3140, PSYC 4140 as an appropriate course. We are writing to

seek your input as to whether or not this is, or others, is a suitable choice, and additionally you would support the proposal. Below is the initial plan for the Statistics Minor

1. One of MATH 1120, MATH 1121, MATH 1241
2. One from MATH 2120, MATH 2241
3. One from STAT 1220, STAT 1221, STAT 1222, Stat 2122
4. STAT 2223
5. ONE from STAT 3110, STAT 3140, STAT 3150, STAT 3160
6. One from BINF 2121, CJUS 3101, COMM 3100, ECON 3122, ECON 3114, ECON 3125, OPER 3202, POLS 2220, PSYC 3140, PSYC 4140, HLTH 3104, SOWK 3100, SOCY 4155, SOCY 4156

Bob Anderson

Dept of Math and Stat

Anderson, Robert

From: Lord, Vivian
Sent: Wednesday, April 25, 2012 4:41 PM
To: Anderson, Robert
Subject: RE: Stat Minor Clarification

Bob,
I understand with Alan's clarification. We support the opportunity for another minor. Thanks, Vivian

PLEASE NOTE NEW TELEPHONE/FAX NUMBER
Vivian B. Lord, PhD | Interim Chair and Professor
UNC Charlotte | Dept. of Public Health Sciences
9201 University City Blvd. | Charlotte, NC 28223
Phone: 704-687-5682 | Fax: 704-687-8122
vlord@uncc.edu | <http://www.publichealth.uncc.edu/>

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From: Anderson, Robert
Sent: Wednesday, April 25, 2012 4:35 PM
To: Lord, Vivian
Subject: Stat Minor Clarification

A clarification seems to be needed. The intent of the Stat Minor is to encourage students in your major to upgrade their statistics background. We are not seeking permission for stat minor students to take say BINF 2121, CIUS 3101, COMM 3100, etc., we are looking to entice your majors to add a stat minor because one of their major courses will count towards the minor. We have no thought whatever that students pursuing a stat minor should be permitted to take a course that they were not otherwise eligible to take. Thanks to those who have already responded and we are looking forward to those who have not yet had time. Bob Anderson Dept of Math and Stat

Anderson, Robert

From: Long, Dennis
Sent: Tuesday, April 24, 2012 3:58 PM
To: Anderson, Robert
Subject: RE: Stat Minor

Follow Up Flag: Follow up
Flag Status: Flagged

Robert,

The Department of Social work certainly supports the proposal for a statistics minor. And, having SOWK 3100 as an option for social work majors declaring the minor would be fine. Unfortunately, students are required (pre-requisite) to be accepted in upper division social work in order to enroll in SOWK 3100. Hence, students not having been accepted in to our upper-division major would not be able to use SOWK 3100 to complete the statistics minor.

Thanks and best wishes,

Dennis

From: Anderson, Robert
Sent: Tuesday, April 24, 2012 2:41 PM
To: Long, Dennis
Subject: Stat Minor

Dennis Long Social Work

The Mathematics and Statistics is in the preliminary stages of proposing a Statistics Minor. Many majors have at least one Stat class as a requirement for its degree. The design of the minor is based on these courses. The design of the minor includes one course selected from list made up from courses with a Statistical emphasis selected from these majors. From the Bioinformatics classes we identified SOWK 3100 as an appropriate course. We are writing to seek your input as to whether or not this is, or others, is a suitable choice, and additionally you would support the proposal. . Below is the initial plan for the Statistics Minor

1. One of MATH 1120, MATH 1121, MATH 1241

2. One from MATH 2120, MATH 2241
3. One from STAT 1220, STAT 1221, STAT 1222, Stat 2122
4. STAT 2223
5. ONE from STAT 3110, STAT 3140, STAT 3150, STAT 3160
6. One from BINF 2121, CJUS 3101, COMM 3100, ECON 3122, ECON 3114, ECON 3125, OPER 3202, POLS 2220, PSYC 3140, PSYC 4140, HLTH 3104, SOWK 3100, SOCY 4155, SOCY 4156

Bob Anderson

Dept of Math and Stat

Anderson, Robert

From: Walker, Lisa
Sent: Tuesday, April 24, 2012 2:57 PM
To: Anderson, Robert
Subject: RE: Stat Minor

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Bob --

This sounds like a great idea. SOCY 4156 would be appropriate, but 4155 would not be. That is a research design course, and only very minimal discussions regarding statistics occur.

Best,

Lisa

Lisa Slattery Walker, Ph.D. | Chair and Professor of Sociology
Professor of Organizational Science

From: Anderson, Robert
Sent: Tuesday, April 24, 2012 2:42 PM
To: Walker, Lisa
Subject: Stat Minor

Lisa Walker Sociology

The Mathematics and Statistics is in the preliminary stages of proposing a Statistics Minor. Many majors have at least one Stat class as a requirement for its degree. The design of the minor is based on these courses. The design of the minor includes one course selected from list made up from courses with a Statistical emphasis selected from these majors. From the Bioinformatics classes we identified SOCY 4155, SOCY 4156 as an appropriate courses. We are writing to seek your input as to whether or not this is, or others, is a suitable choice, and additionally you would support the proposal. Below is the initial plan for the Statistics Minor

1. One of MATH 1120, MATH 1121, MATH 1241
2. One from MATH 2120, MATH 2241
3. One from STAT 1220, STAT 1221, STAT 1222, Stat 2122
4. STAT 2223
5. ONE from STAT 3110, STAT 3140, STAT 3150, STAT 3160

6. One from BINF 2121, CJUS 3101, COMM 3100, ECON 3122, ECON 3114, ECON 3125, OPER 3202, POLS 2220, PSYC 3140, PSYC 4140, HLTH 3104, SOWK 3100, SOCY 4155, SOCY 4156

Bob Anderson

Dept of Math and Stat

Harris, Kim

From: Tierney, Barbara
Sent: Thursday, June 28, 2012 4:54 PM
To: Harris, Kim
Cc: Reimer, Carol
Subject: Barbara Tierney fw: "Atkins Library Collection Analysis" in support of the Dept. of Mathematics & Statistics proposal to establish a Minor in Statistics
Attachments: Long Form Statistics Minor.doc; CP Math Minor in Statistics 2012 0629.doc

Dear Kim,

Attached, please find my "Atkins Library Collection Analysis" in support of your proposal to establish a Minor in Statistics. As you will see, I found that Atkins Library does indeed have enough relevant resources to support this new program.

Best Regards,

Barbara Tierney, Subject Librarian to the
Department of Mathematics and Statistics

SUMMARY OF REFERENCE LIBRARIAN'S EVALUATION OF HOLDINGS:

Evaluator: Barbara G. Tierney **Date:** June 28, 2012

- Check one:**
1. Holdings are superior.
 2. Holdings are adequate Please see Comments
 3. Holdings are adequate only if department purchases add.holdings
 4. Holdings are inadequate

Comments: I find that the J. Murrey Atkins Library has adequate holdings (including print and electronic indexes, databases, journals and books) to support the proposed "Minor in Statistics" program. Please see the below relevant library resources that support this new program.

Reference Indexes and Databases (Electronic and Print)

Academic Search Premier
MathSci Net (electronic)
Science Direct
Springer Verlag
Web of Science
Wiley Online Library

Books:

A search of the Atkins Library online catalog using the below listed Library of Congress Subject Headings and keywords reveals the following total number of titles in Atkins Library as well as the number of titles dated 2005 or newer.

Subject Heading or Keyword	Total # of Titles in Atkins Library	#Titles 2005+
Biometry	68	8
Correlation (Statistics)	25	2
Fuzzy Statistics	1	0
Large Deviations	13	3
Law of Large Numbers	5	0
Mathematical Statistics	377	32

Multiple Integrals	7	0
Multivariate Analysis	185	22
Probabilities	502	52
Ranking and Selection Statistics	8	3
Sequential Analysis	19	1
Statistical Functions	5	1
Statistics	389	86
Stochastic Processes	260	35
Times-Series Analysis	151	12

Journals

The database "Journal Citation Reports" lists the most prestigious journals in the sciences. For the subject of "Statistics" JCR lists the following 110 journals. I have indicated below with "YES" (to the left of the journal title) the journals to which Atkins Library has access. Out of the 110 JCR Statistics journal titles, Atkins Library has access to 95 of them (86 %). [Please see the JCR list of "Statistics Journals" at end of this report.]

From: Harris, Kim
Sent: Tuesday, June 26, 2012 11:35 AM
To: Tierney, Barbara
Subject: Library Consultation for curriculum proposal

Hi Barbara:

The math department is proposing a new minor in statistics for students whose majors already require at least one course from our department and a second statistics-based course in their major department.

I have attached the proposal and need a library consultation before we can move forward.

Thanks for your help.

Kim

Kim Harris
 Undergraduate Coordinator
 Department of Mathematics and Statistics
 UNC Charlotte
 Charlotte, NC 28223
 704-687-4565

Service to others is the rent you pay for your room here on earth.
 Muhammad Ali

From: Mays, Larry
Sent: Sunday, November 04, 2012 3:08 PM
To: Harris, Kim
Cc: Schlueter, Shannon
Subject: Re: Minor in Statistics

Dear Kim,
We do not have a major in Bioinformatics and Genomics, only a minor. If a student minors in Statistics and Bioinformatics & Genomics, then we would not require an additional statistics course.
Larry Mays

From: <Harris>, Kim <mkharris@uncc.edu>
Date: Friday, November 2, 2012 4:54 PM
To: Lawrence Mays <lemays@uncc.edu>
Subject: Minor in Statistics

Dear Larry:

The Math Department's proposal for a new Minor in Statistics has been approved by the Curriculum Committee of the College of Liberal Arts and Sciences pending clarification of one issue. The concern was described in this way:

The major concern about the proposal was how courses that were part of the minor would count toward completion of a major, for those departments where students were already required to do coursework. For example, in Communication Studies, students are required to complete 6-18 hours of approved related coursework to complete the major. One of those courses is COMM 3100, which is also part of this minor. But Communication Studies does not allow students to count a course toward the major requirements and the "approved related coursework." Would a student in Communication Studies, then, need to complete an additional course in statistics to complete the minor in statistics? Although the proposal includes consultations from the various departments who have a course in statistics—and all those consultations strongly endorse the existence of this minor—they are not explicit about whether the consultations considered this precise issue.

The view of our departmental curriculum committee is that we would NOT want to require an additional statistics course. Please help me clarify this for the college committee so that we can move this on through the approval process.

If a student in your major chooses the minor in Statistics, will you allow the course from your department to count towards both the minor and the major?

From: Saydam, Gem
Sent: Sunday, November 04, 2012 9:17 AM
To: Harris, Kim
Cc: Kerr, Daryl
Subject: RE: Minor in Statistics

If a student in your major chooses the minor in Statistics, will you allow the course from your department to count towards both the minor and the major?

Yes, we would.

Cem Saydam, Ph.D. | Chair | Professor of Operations Management
UNC Charlotte | Dept. of BIS and Operations Management
9201 Univ City Blvd. | Charlotte | NC 28223
Phone: 704-687-7616 | Fax: 704-687-6330
saydam@uncc.edu | <http://www.uncc.edu>

From: Harris, Kim
Sent: Friday, November 02, 2012 4:56 PM
To: Saydam, Gem
Subject: Minor in Statistics

Dear Gem:

The Math Department's proposal for a new Minor in Statistics has been approved by the Curriculum Committee of the College of Liberal Arts and Sciences pending clarification of one issue. The concern was described in this way:

The major concern about the proposal was how courses that were part of the minor would count toward completion of a major, for those departments where students were already required to do coursework. For example, in Communication Studies, students are required to complete 6-18 hours of approved related coursework to complete the major. One of those courses is COMM 3100, which is also part of this minor. But Communication Studies does not allow students to count a course toward the major requirements and the "approved related coursework." Would a student in Communication Studies, then, need to complete an additional course in statistics to complete the minor in statistics? Although the proposal includes consultations from the various departments who have a course in statistics—and all those consultations strongly endorse the existence of this minor—they are not explicit about whether the consultations considered this precise issue.

The view of our departmental curriculum committee is that we would NOT want to require an additional statistics course. Please help me clarify this for the college committee so that we can move this on through the approval process.

If a student in your major chooses the minor in Statistics, will you allow the course from your department to count towards both the minor and the major?

From: Long, Shawn
Sent: Sunday, November 04, 2012 4:56 PM
To: Harris, Kim
Subject: RE: Minor in Statistics

Kim,

I consulted with our undergraduate coordinator and here is where we are:

The double counting of Comm 3100 for the Stats minor would only affect those students in the mass media, org comm, and public advocacy tracks, as they are required to have 18 hours of related coursework. They could choose an additional course in consultation with their advisor, not necessarily a stats course, that would give them the requisite 18 hours.

It would be fine to let students double count 3100 for the Stats minor.

Thanks,
Shawn

Shawn D. Long, Ph.D.
Chair, Department of Communication Studies
9201 University City Blvd.
Charlotte, NC 28223
(704) 687-0783 *NEW*
shawn.long@uncc.edu
www.communications.uncc.edu

From: Bjerregaard, Beth
Sent: Thursday, November 08, 2012 1:42 PM
To: Harris, Kim
Subject: Re: Minor in Statistics

Yes -- for our majors. The course is restricted to majors only. Beth

--
Beth Bjerregaard, Ph.D. | Professor & Chair
UNC Charlotte | Department of Criminal Justice & Criminology
9201 University City Blvd. | Charlotte, NC 28223-0001
Phone: 704-687-0738 | Fax: 704-687-5285 *NOTE NEW NUMBERS
bebjerre@uncc.edu | <http://criminaljustice.uncc.edu/>

From: "Harris, Kim" <mkharris@uncc.edu>
Date: Wed, 7 Nov 2012 17:52:22 -0500
To: Microsoft Office User <bebjerre@uncc.edu>
Subject: RE: Minor in Statistics

Hi Beth:

Is CJUS 3101 a course that students would take for the major? If so, would y'all let it count for both the major and the minor?

Thanks,
Kim

From: Kerr, Daryl
Sent: Monday, November 05, 2012 11:12 AM
To: Troyer, Jennifer; Harris, Kim
Cc: Kerr, Daryl
Subject: RE: Minor in Statistics

Kim:

Yes, that is correct. The Belk College double counts one course for two majors, or for a major (ECON) and a minor (STAT).

Best regards,

Daryl

Daryl L. Kerr, Ph.D. | Associate Dean for Undergraduate Programs
UNC Charlotte | Belk College of Business
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From: Troyer, Jennifer
Sent: Monday, November 05, 2012 10:50 AM
To: Harris, Kim
Cc: Kerr, Daryl
Subject: RE: Minor in Statistics

Kim,

It is my understanding that the course (ECON 3112) from the Department of Economics would count towards both the Statistics minor and the Economics major. I am copying Daryl Kerr, Associate Dean for Undergraduate Programs, on this message to confirm.

Best of luck on getting the minor added.

Regards-

Jennifer

Political Science

From: Weeks, Gregory
Sent: Friday, November 02, 2012 5:08 PM
To: Harris, Kim
Subject: RE: Minor in Statistics

Hi Kim,

If I understand this correctly, you are just asking whether a political science major could use POLS 2220 to count for the STAT minor? That sounds fine to me—I think the minor would be great for our more methodologically minded political science majors. We actually have a policy of allowing a few double-counted courses for any second major or minor.

Greg

From: Cachelln, Fary
Sent: Monday, November 05, 2012 9:31 AM
To: Harris, Kim
Subject: RE: Minor in Statistics

Hi Kim,

Psychology allows a student to double count up to 6 hours for the major and minor. So this would not be a problem.

Thank you,
Fary

Proposed Catalog Copy

PROPOSED CATALOG COPY:

MINOR IN Statistics

A minor in Statistics requires the following six courses:

1. MATH 1120, 1121, or 1241
2. MATH 2120 or 2241
3. STAT 1220, 1221, 1222, or 2122
4. STAT 2223
5. STAT 3110, 3140, 3150, or 3160
6. One course from the following list in the student's major: BINF 2121, CJUS 3101, COMM 3100, ECON 3112, OPER 3206, POLS 2220, PSYC 3140, HLTH 3104, SOWK 3100, SOCY 4156.

IMPORTANT NOTE: A Microsoft Word version of the final course and curriculum proposal should be sent to facultygovernance@uncc.edu upon approval by the Undergraduate Course and Curriculum Committee and/or Graduate Council chair.