

# WINONA STATE UNIVERSITY NOTIFICATIONS

Department Mathematics & Statistics

Date 1/20/13

If the proposed curricular change involves existing courses and is considered a Notification, complete and submit this form. Refer to Regulation 3-4, **Policy for Changing the Curriculum**, for complete information on submitting proposals for curricular changes.

Please check type of change(s):

☐ Reduction in course number ☐ Change in grading option ☐ Change in hours or credits in an independent study course  
☒ Change in course title ☒ Change in course description\* ☐ Change in existing major, minor, option, concentration, etc.\*  
☒ Change in prerequisites ☒ Change in course number within level, e.g. 310 to 350 ☐ Change in delivery method

## A. Current Course Information

STAT 425 Modern Methods of Data Analysis 3  
Course No. Course Title Credits

This proposal is for a(n) ☒ Undergraduate Course ☐ Graduate Course

Applies to ☒ Major ☒ Minor  
☐ Required ☐ Required  
☒ Elective ☒ Elective

Prerequisites STAT 360 or permission of instructor

Grading ☐ Grade only ☐ P/NC only ☒ Grade and P/NC Option

Frequency of offering Alternate Spring Semesters

**Proposed** Course Information. (Please indicate only proposed changes below.)

DSCI 425 Supervised Learning 3  
Course No. Course Title Credits

Prerequisites DSCI 210 and STAT 360 or permission of instructor

Grading ☐ Grade only ☐ P/NC only ☒ Grade and P/NC Option

Frequency of offering Alternate years

Effective date (normally the next semester) Fall 2014

B. \*If the proposal requests a change in the course description, please attach a description of the change requested and list both the current and proposed course description. If the proposal requests a change in an existing major, minor, option, concentration, etc., please attach a description of the change(s) requested and list both the current and proposed program listings.

Approved by the Department


  
Department Chair

1/24/14  
Date

bdeppa@winona.edu  
e-mail address

Notification to the College Dean

☒ Yes ☐ No

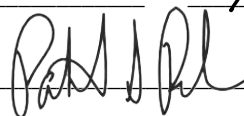
  
Dean of College

1/29/14  
Date

Presented at A2C2 meeting on

3/19/2014  
Date

Chair of A2C2



Presented at Graduate Council meeting on (if applicable)

Date

Chair of Graduate Council

Submitted to Registrar on

3/20/2014  
Date

Registrar: Please notify department chair via e-mail that Notification has been recorded.

\*If a dean has comments on a notification, the dean shall forward the comments to the department. [Revised 7-13-11]

Current Course Description	New Course Description
<p><b>STAT 425 – Modern Methods of Data Analysis (3 S.H.)</b>  An introduction to the use of the computer as a powerful tool in data analysis. Topics will include statistical graphics, advanced regression techniques, curve fitting and smoothing, generalized additive models, CART, multivariate techniques, cross-validation and the bootstrap. Additional topics that may be covered are random number generation and Monte Carlo simulation methods. Prerequisites: MATH 165 and STAT 360. Offered alternate spring semesters.</p>	<p><b>DSCI 425 – Supervised Learning (3 S.H.)</b>  An introduction to machine or statistical learning techniques, covering both supervised and unsupervised methods. Supervised methods for predicting both numeric and categorical responses will be the focus. Unsupervised learning methods such as clustering, association rules, and dimension reduction methods will be briefly discussed. Prerequisite: DSCI 210 – Data Science and STAT 360 – Regression Analysis or permission of instructor. Offered alternate years.</p>

**Winona State University - Department of Mathematics & Statistics**  
**Minutes of the Department Meeting on 1/24/14**

**Present:** Joyati Debnath, Brant Deppa (chair), Jeff Draskoci-Johnson, Eric Errthum, Tisha Hooks, April Kerby, Steve Leonhardi, Chris Malone, Mike Markegard, Barry Peratt, Sam Schmidt, Samuel Tsegai, Aaron Wangberg, Nicole Williams, Lee Windsperger

**New Business:** Note: All of the items below were considered after the department waived the 40-hour rule without objection.

**Motions from the Statistics Subgroup**

**1. STAT 100 – new course proposal and GEP proposal**

The new STAT 100 course proposal and GEP proposal were approved without objection.

**2. New program: B.S. Data Science (DSCI) major, minor, and courses**

- (i) The department approved two versions of the major, both without objection. The Math department indicated a preference for Version 2, but voted to accept Version 1 if Computer Science preferred that one. Chris was directed to submit whichever one Computer Science preferred. (Their discussion was still pending as of our meeting.)
- (ii) The minor was approved without objection, also with the understanding that Computer Science might want to edit certain courses in the elective list.
- (iii) All new courses associated with the proposed data science major were approved without objection. These include DSCI 210, DSCI 310, DSCI 395, DSCI 488, DSCI 492, and DSCI 495.

**(iv) The notifications for the conversion of STAT 325 to DSCI 325 and STAT 425 to DSCI 425 were approved without objection.**

**3. Program revisions: B.S. Statistics (STAT) major, minor, and courses**

- (i) All revisions, both to the major and to the minor were approved without objection.
- (ii) STAT 395 and STAT 495, i.e. the analogous courses to DSCI 395 and DSCI 495, were approved without objections.

Supporting documentation for items 1 – 3 above were sent to the department by Tisha Hooks (STAT 100) and Chris Malone (DSCI and STAT programs) via e-mail (01/22/14).

**4. Notifications re: STAT**

The following notifications seek Departmental approval. 1) In Spring, 2013, the department voted to make STAT 310 the prerequisite for a number of upper-division STAT courses. Either this paperwork was not submitted, or got lost. 2) The note in the course description for STAT 305 was corrected to read STAT 305 instead of Math 305. 3) A notification to edit course description slightly and to allow ECON 222 to serve as a possible prerequisite for STAT 310. 4) Include DSCI 210 as a prerequisite for STAT 370.

The department approved the submission/resubmission of all of these notifications.

**5. Notifications re: MATH courses**

The following notifications were submitted for departmental approval. (i) A change in course title for MATH 112 from "Modeling with Functions" to "Applied Precalculus" (ii) A change in the catalog description of MATH 112. (See the catalog language at the end of these minutes.) (iii) A change in number for MATH 140 to MATH 132 AND a change in prerequisites from "MATH 112 - Modeling with Functions, MATH 115 - College Algebra, or MATH 120 - Precalculus" to "MATH 112 – Applied Precalculus, MATH 115 - College Algebra, or MATH 120 - Precalculus" (iv) A change in the catalog description of MATH 132. (See the catalog language at the end of these minutes.)

The department approved all of these changes without objection.

**6. Proposal re: MATH 117 from Steve, Barry, and Jeff**

The department approved without objection the proposal to submit MATH 117 as a new course and also the proposal to submit it as a GEP course under Goal 4. Since the Math Subgroup had not had a chance to vote on the committee's work, the department waived normal procedures without objection. (The documents were handed out in the meeting.)

Secretary's note: If there is any confusion as to what, exactly, the department agreed to in Items 1-6 above, I can supply copies of the A2C2 paperwork upon request. Summaries of the proposals re: data science and statistics are attached below.

**7. Adjourn**

We adjourned about 12:50 p.m.

Respectfully submitted,  
Jeff Draskoci-Johnson