Course Changes
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional

- Submit original form and attachments -

Form Instructions
1. Course request type:
   - Undergraduate
   - Graduate
   - First Professional (e.g., DPM, JD, MD, etc.)

2. Request submitted by (Department or Program Name):
   - Department of Statistics

3. Course prefix, number and complete title of course:
   - STAT 616 - Multivariate Analysis

4. Change requested
   a. Prerequisite(s):
      - From: STAT 611, STAT 612
      - To: STAT 612, STAT 613
   b. Withdrawal (reason):
   c. Cross-list with:
   d. Change in course title and description. Enter complete current course title and current course description in item 5; enter proposed course title and proposed course description in item 6. Complete item 7 for change in title.
   e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.
   f. Is this an existing core curriculum course?
      - Yes
      - No
   g. If this course will be stacked, please indicate the course number of the stacked course:
   h. I verify that I have reviewed the FAQ for Export Control Basics for Distance Education (http://vpr.tamu.edu/resources/export-controls/export-controls-basics-for-distance-education).

5. Complete current course title and current catalog course description:
   Multivariate Analysis:
   Multivariate normal distributions and multivariate generalizations of classical test criteria, Hotelling's T2, discriminant analysis and elements of factor and canonical analysis

6. Complete proposed course title and proposed catalog course description (not to exceed 50 words):
   Statistical Aspects of Machine Learning I: Classical Multivariate Methods
   Core methods from traditional multivariate analysis and various extensions. Probability distributions of random vectors and matrices, multivariate normal distributions, model assessment and selection in multiple regression, multivariate regression, dimension reduction, linear discriminant analysis, logistic discriminant analysis, cluster analysis, multidimensional scaling and distance geometry, and correspondence analysis.

7. a. As currently in course inventory:
   Prefix | Course # | Title (excluding punctuation)
   STAT  | 616      | Multivariate Analysis
   Lab    | SCL | CRH | ECT | Credit Hours
   0      | 3   | 0  | 0   | 0  | 3  | 2  | 7  | 0  | 5  | 0  | 3  | 0  | 0  | 1  | 2  | 7  | 4  | 0  | 0  | 3  | 6  | 3  | 2
   b. Change to:
   Prefix | Course # | Title (excluding punctuation)
   STAT  | 616      | STAT OF MACH. LEARN. - I
   Lab    | SCL | CRH | ECT | Credit Hours
   0      | 3   | 0  | 0   | 0  | 3  | 2  | 7  | 0  | 5  | 0  | 3  | 0  | 0  | 1  | 2  | 7  | 4  | 0  | 1  | 4  | 0  | 3  | 6  | 3  | 2

Approval recommended by:
Michael Longnecker 4-14-2314

Department Head or Program Chair (Type Name & Sign)

Date

Chair, College Research Committee

Date

Department Head or Program Chair (Type Name & Sign)

Date

(I'm cross-listed course)

Date

Chair, OIC or UCC

Date

Submitted to Coordinating Board by:

Date

Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu.
Curricular Services – 04/14
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
• Submit original form and attachments •

Form Instructions
1. Course request type:
   ☐ Undergraduate   ☑ Graduate   ☐ First Professional (ex. DVM, JD, MD, etc.)
2. Request submitted by (Department or Program Name):
   Department of Statistics
3. Course prefix, number and complete title of course:
   STAT 618: Statistical Aspects of Machine Learning and Data Mining
   Minor field requirements: none
4. Change requested:
   a. Prerequisite(s): From: STAT 610, STAT 611, and STAT 613
      To: STAT 612, STAT 613, and STAT 616
   b. Withdrawal (reason):
   c. Cross-list with:

   Cross-listed courses require the signature of both department heads.

d. Change in course title and description. Enter complete current course title and current course description and course number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

   Change in course title and description:
   Statistical Aspects of Machine Learning and Data Mining
   Examine the statistical aspects of techniques used to examine data streams which are large scale, dynamic, and heterogeneous; examines the underlying statistical properties of classification; trees; bagging and boosting methods; neural networks; support vector machines; cluster analysis; and independent component analysis

5. Is this an existing core curriculum course?
   ☐ Yes    ☑ No

6. If this course will be stacked, please indicate the course number of the stacked course:

7. ☑ I verify that I have reviewed the FAQ for Export Control Basics for Distance Education (http://vpr.tamu.edu/resources/export-controls/export-controls-basics-for-distance-education).

8. Complete current course title and current catalog course description:
   Statistical Aspects of Machine Learning and Data Mining
   Examine the statistical aspects of techniques used to examine data streams which are large scale, dynamic, and heterogeneous; examines the underlying statistical properties of classification; trees; bagging and boosting methods; neural networks; support vector machines; cluster analysis; and independent component analysis

9. Complete proposed course title and proposed catalog course description (not to exceed 50 words):
   Statistical Aspects of Machine Learning II: Modern Techniques
   Second course in statistical machine learning. Recursive partition and tree-based methods, artificial neural networks, support vector machines, reproducing kernels, committee machines, latent variable methods, component analysis, nonlinear dimensionality reduction and manifold learning, matrix factorization and matrix completion, statistical analysis of tensors and multi-indexed data.

10. a. As currently in course inventory:
    Prefix     Course 9 Number    Title (excluding punctuation)
            STAT       618          STAT MACH LEARN & MINING
    Text     Lab     SCL     CRF and Field Code          Admin. Unit    ECT Code
    0 3 0 0 0 3 2 7 0 5 0 3 0 0 1 2 7 4 0 0 3 6 3 2

    b. Change to:
    Prefix     Course 9 Number    Title (excluding punctuation)
            STAT       618          STAT OF MACH. LEARN. - II
    Text     Lab     SCL     CRF and Field Code          Admin. Unit    Acd. Year    ECT Code
    0 3 0 0 0 3 2 7 0 5 0 3 0 0 1 2 7 4 0 1 3 1 4 0 0 3 6 3 2

Approval recommended by:
Michael Longenecker 4-14-2014

Department Head or Program Chair (Type Name & Sign) Date
Chair, College of Science Date
Chair, College of Engineering Date
Chair, GC or JCC Date

Submitted to Coordinating Board by:
Associate Director, Curricular Services Date

Questions regarding this form should be directed to Sandra Williams at 845-1201 or sandra.williams@tamu.edu.
Curricular Services – 04/14
Texas A&M University
Departamental Request for a Change in Course
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Form Instructions
1. Course request type:
   [ ] Undergraduate [ ] Graduate [ ] First Professional (ex. DVM, JD, MD, etc.)
2. Request submitted by (Department or Program Name):
   Department of Statistics
3. Course prefix, number and complete title of course:
   STAT 636 - Methods in Multivariate Analysis

4. Change requested
   a. Prerequisite(s): From:
   b. Withdrawal (reason):
   c. Cross-list with:

5. Change in course title and description. Enter complete current course title and current course description in item 5; enter proposed course title and proposed course description in item 6. Complete item 7 for change in title.

6. Cross-listed courses require the signature of both department heads.

7. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

8. Is this an existing core curriculum course?
   [ ] Yes [ ] No

9. If this course will be stacked, please indicate the course number of the stacked course:

10. I verify that I have reviewed the FAQ for Export Control Basics for Distance Education (http://vpr.tamu.edu/resources/export-controls/export-controls-basics-for-distance-education).

11. Complete current course title and current catalog course description:
    Methods in Multivariate Analysis -
    Multivariate extensions of the chi-square and t-tests, discrimination and classification procedures; applications to diagnostic problems in biological, medical, anthropological and social research; multivariate analysis of variance, principal component and factor analysis, canonical correlations.

12. Complete proposed course title and proposed catalog course description (not to exceed 50 words):
    Applied Multivariate Analysis -
    Multivariate extensions of the chi-square and t-tests, discrimination and classification procedures; applications to diagnostic problems in biological, medical, anthropological and social research; multivariate analysis of variance, principal component and factor analysis, canonical correlations.

13. As currently in course inventory:
   a. STAT 656 - Applied Analytics
      b. Change to:

   Department Head or Program Chair (Type Name & Sign) Date
   (if cross-listed course)
   Department Head or Program Chair (Type Name & Sign) Date
   Chair, College Review Committee Date
   Chair, Department Date
   Chair, GC or ICCC Date
   Associate Director, Curricular Services Date
   Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu
   Curricular Services – 04/14
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
• Submit original form and attachments •

Form Instructions
1. Course request type:  □ Undergraduate  □ Graduate  □ First Professional (e.g., DVM, JD, MD, etc.)
2. Request submitted by (Department or Program Name):  Department of Statistics
3. Course prefix, number and complete title of course:  STAT 656 - Applied Analytics Using SAS Enterprise Miner

Change requested
a. Prerequisite(s): From:  STAT 657  To:  STAT 657, STAT 659
b. Withdrawal (reason):  

c. Cross-list with:  

d. Change in course title and description. Enter complete current course title and current course description in item 5; enter proposed course title and proposed course description in item 6. Complete item 7 for change in title.

e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

5. Is this an existing core curriculum course?  □ Yes  □ No

6. If this course will be stacked, please indicate the course number of the stacked course:  

7. □ I verify that I have reviewed the FAQ for Export Control Basics for Distance Education (http://vpr.tamu.edu/resources/export-controls/export-controls-basics-for-distance-education).

8. Complete current course title and current catalog course description:

9. Complete proposed course title and proposed catalog course description (not to exceed 50 words):

10. a. As currently in course inventory:

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<th>Prefix</th>
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Approval recommended by:
Michael Longnecker 4-14-2014

Department Head or Program Chair (Type Name & Sign)
Date        Chair, College Review Committee
Date

Department Head or Program Chair (Type Name & Sign) (If cross-listed course)

Date

Date of College

Date

Chair, GOC or UCC

Date

Submitted to Coordinating Board by:

Date

Associate Director, Curricular Services

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu.
Curricular Services – 04/14