

The University Of Toledo

Existing Graduate Course Modification Form

* denotes required fields

Contact Person*: Don White Phone: 530-4502 (xxx - xxxx) Email: donald.white@utoledo.edu

Present

Supply all information asked for in this column.
(Supply core, research intensive and transfer module info if applicable)

College*: College Nat Sci and Mathematics
Dept/Academic Unit*: Mathematics & Statistics
Course Alpha/Numeric*: MATH 5640

Course Title:

Statistical Computing

Credit hours: Fixed: 3 or Variable: to

CrossListings:

MATH 4640 MATH 7640

Insert

To add a course, type in course ID and click the Insert button.

To remove a course, select the course on left and click the Remove button.

Remove

Prerequisite(s)(if longer than 50 characters, please place it in Catalog Description):

Corequisite(s)(if longer than 50 characters, please place it in Catalog Description):

Catalog Description (only if changed) 75 words max:

Proposed

Fill in appropriate blanks only where entry differs from first column.

College: College Nat Sci and Mathematics
Dept/Academic Unit: Mathematics & Statistics
Course Alpha/Numeric: MATH 5640

Course Title:

Statistical Computing

Credit Hours: Fixed: 3 or Variable: to

CrossListings:

MATH 4640 MATH 7640

Insert

To add a course, type in course ID and click the Insert button.

To remove a course, select the course on left and click the Remove button.

Remove

Prerequisite(s)(if longer than 50 characters, please place it in Catalog Description):

Corequisite(s)(if longer than 50 characters, please place it in Catalog Description):

Catalog Description (only if changed) 75 words max:

Error analysis of statistical algorithms. Numerical linear algebra for linear models. Approximation methods for distribution function probabilities and quantiles. Uniform and non-uniform random number generation. Introduction to simulation methods.

Modern statistical computing, including programming tools, modern programming methodologies, design of data structures and algorithms, numerical computing and graphics. Additional topics selected from simulation studies, inversion of probability integral transforms, rejection sampling, importance sampling, Monte Carlo integration, bootstrapping and optimization.

Has
course
content
changed?

☒ Yes

☐ No


If course content is changed, give a brief topical outline of the revised course below(less than 200 words)

The ultimate goal of this course is to provide computational tools and methodologies necessary for a statistical researcher. The material is selected to enable the student to become proficient in actively implementing the methods and tools in research.

Proposed effective term*: (e.g. 201140 for 2011 Fall)

File Type	View File
Syllabus	View

List any course or courses to be deleted.

Effective Date: 

Effective Date: 

Comments/Notes:

Revised by Don White 4/4/16

Rationale:

The content of the old course is being upgraded, updated, and rearranged to better fit current programmatic needs. This course modification was undertaken in conjunction with the revision of our Master's of Science in Statistics concentration.

Approval:

Department Curriculum Authority:	<input type="text" value="Trieu Le"/>	Date	<input type="text" value="2016/03/22"/>
Department Chairperson:	<input type="text" value="Donald B. White"/>	Date	<input type="text" value="2016/03/22"/>
College Curriculum Authority or Chair:	<input type="text" value="Michael Cushing"/>	Date	<input type="text" value="2016/04/19"/>
College Dean:	<input type="text" value="Karen Bjorkman"/>	Date	<input type="text" value="2016/04/19"/>
Graduate Council:	<input type="text" value="Constance Schall (GCEC 8.5.2016)"/>	Date	<input type="text" value="2016/08/09"/>
Dean of Graduate Studies:	<input type="text" value="Amanda Bryant-Friedrich"/>	Date	<input type="text" value="2016/08/10"/>
Office of the Provost :	<input type="text" value="marcia king-blandford"/>	Date	<input type="text" value="2016/08/10"/>

Administrative Use Only

Effective Date:	<input type="text" value="2016/08/22"/>	(YYYY/MM/DD)
CIP Code:	<input type="text"/>	
Subsidy Taxonomy:	<input type="text"/>	
Program Code:	<input type="text"/>	
Instructional Level:	<input type="text"/>	

Registrar's Office Use Only

Processed in Banner on:	<input type="text" value="2016/08/11"/>	
Processed in Banner by:	<input type="text" value="Tasha Woodson"/>	

Banner Subject Code:	MATH
Banner Course Number:	5640
Banner Term Code:	201640
Banner Course Title:	Statistical Computing