M E M O R A N D U M

Faculty Senate Approved April 2, 2015

TO: Deans and Chairs

FROM: Becky Bitter, Sr. Assistant Registrar

DATE: March 26, 2015

SUBJECT: Minor Change Bulletin No. 11

The courses listed below reflect the minor curricular changes approved by the catalog editor since approval of the last Minor Change Bulletin. The column to the far right indicates the date each change becomes effective.

Subject	Course Number	New Revise Drop	Current	Proposed	Effective Date
CPT S	**121**	**Revise**	**Program Design and Development** 4 (3-3) Course Prerequisite: MATH ~~107,~~ 108, 171, 172, 182, 201, 202, 206, or 220, each with a C or better, or ALEKS math placement score of 80% or higher, or adequate CPT S placement test score determined by the department. Formulation of problems and top-down design of programs in a modern structured language for their solution on a digital computer. Typically offered Fall, Spring, and Summer.	**Program Design and Development C/C++** 4 (3-3) Course Prerequisite: MATH 108, 171, 172, 182, 201, 202, 206, or 220, each with a C or better, or ALEKS math placement score of 80% or higher, or adequate CPT S placement test score determined by the department. Formulation of problems and top-down design of programs in a modern structured language (C/C++) for their solution on a digital computer. Typically offered Fall, Spring, and Summer.	**8-15**
CPT S	**122**	**Revise**	**Data Structures** 4 (3-3) Course Prerequisite: CPT S 121 with a C or better. Advanced programming techniques: data structures, recursion, sorting and searching, and basics of algorithm analysis. Typically offered Fall, Spring, and Summer.	**Data Structures C/C++** 4 (3-3) Course Prerequisite: CPT S 121 with a C or better. Advanced programming techniques: data structures, recursion, sorting and searching, and basics of algorithm analysis taught in C/C++ programming language. Typically offered Fall, Spring, and Summer.	**8-15**
CPT S	**223**	**Revise**	**Advanced Data Structures** 3 Course Prerequisite: CPT S 122 with a C or better; MATH 216 with a C or better or concurrent enrollment. Advanced data structures, object oriented programming concepts, concurrency, and program design principles. Typically offered Fall	**Advanced Data Structures C/C++** 3 Course Prerequisite: CPT S 122 with a C or better; MATH 216 with a C or better or concurrent enrollment. Advanced data structures, object oriented programming concepts, concurrency, and program design principles taught in C/C++	**8-15**

			and Spring.	programming language. Typically offered Fall and Spring.	
CPT S	**360**	**Revise**	**Systems Programming** 4 (3-3) Course Prerequisite: CPT S 223 with a C or better; CPT S 260 with a C or better or E E 234 with a C or better; certified major in Computer Science, Computer Engineering, or Electrical Engineering. Implementation of ~~sys-tems~~ programs, concepts of computer operating systems; laboratory experience in using operating system facilities. Typically offered Fall and Spring.	**Systems Programming C/C++** 4 (3-3) Course Prerequisite: CPT S 223 with a C or better; CPT S 260 with a C or better or E E 234 with a C or better; certified major in Computer Science, Computer Engineering, or Electrical Engineering. Implementation of systems programs, concepts of computer operating systems; laboratory experience in using operating system facilities taught in C/C++ programming language. Typically offered Fall and Spring.	**8-15**
MATH	**103**	**Revise**	**Algebra Methods and Introduction to Functions** 3 Course Prerequisite: MATH 100 with an S or ALEKS math placement score of ~~30%.~~ Fundamental algebraic operations and concepts, linear systems and inequalities, polynomial and rational functions, introduction to exponential and logarithmic functions. Typically offered Fall, Spring, and Summer.	**Algebra Methods and Introduction to Functions** 3 Course Prerequisite: MATH 100 with an S, MATH 101 with a C or better, or ALEKS math placement score of 40%. Fundamental algebraic operations and concepts, linear systems and inequalities, polynomial and rational functions, introduction to exponential and logarithmic functions. Typically offered Fall, Spring, and Summer.	**8-15**
MATH	**105**	**Revise**	**[QUAN] [N] Exploring Mathematics** 3 Course Prerequisite: MATH 101 with a C or better, MATH 103 with a C or better, or ALEKS math placement score of ~~40%~~. Nature and scope of modern mathematics, and its relationships to other disciplines. Typically offered Fall, Spring, and Summer.	**[QUAN] [N] Exploring Mathematics** 3 Course Prerequisite: MATH 101 with a C or better, MATH 103 with a C or better, or ALEKS math placement score of 45%. Nature and scope of modern mathematics, and its relationships to other disciplines. Typically offered Fall, Spring, and Summer.	**8-15**
MATH	**106**	**Revise**	**College Algebra** 3 Course Prerequisite: MATH 101 with a C or better, or Math 103 with a C or better, or ALEKS math placement score of ~~55%~~. Graphs, properties and applications of polynomial, rational, exponential and logarithmic functions. ~~Credit not normally granted for both MATH 106 and 107.~~ Typically offered Fall, Spring, and Summer.	**College Algebra** 3 Course Prerequisite: MATH 101 with a C or better, or Math 103 with a C or better, or ALEKS math placement score of 70%. Graphs, properties and applications of polynomial, rational, exponential and logarithmic functions. Typically offered Fall, Spring, and Summer.	**8-15**

MATH	**140**	**Revise**	**[QUAN] [N] Calculus for Life Scientists** 4 (3-3) Course Prerequisite: MATH 106 with a C or better and MATH 108 with a C or better, ~~or MATH 107 with a C or better,~~ or ALEKS math placement score of ~~70%~~. Enrollment not allowed if credit already earned for MATH 171, 202, or 206. Differential and integral calculus with emphasis on life science applications. Credit not ~~normally allowed~~ for more than one of MATH 140, 171, 202, 206.	**[QUAN] [N] Calculus for Life Scientists** 4 (3-3) Course Prerequisite: MATH 106 with a C or better and MATH 108 with a C or better, or ALEKS math placement score of 80%. Enrollment not allowed if credit already earned for MATH 171, 202, or 206. Differential and integral calculus with emphasis on life science applications. Credit not granted for more than one of MATH 140, 171, 202, 206.	**8-15**
MATH	**171**	**Revise**	**[QUAN] ~~[N]~~ Calculus I** 4 (3-3) Course Prerequisite: MATH 106 with a C or better and MATH 108 with a C or better, ~~or MATH 107 with a C or better,~~ or ALEKS math placement score of ~~80%~~. Enrollment not allowed if credit already earned for MATH 140, 202, or 206. Differential and integral calculus of one variable with associated analytic geometry. Credit not ~~normally allowed~~ for more than one of MATH 140, 171, 202, 206.	**[QUAN] Calculus I** 4 (3-3) Course Prerequisite: MATH 106 with a C or better and MATH 108 with a C or better, or ALEKS math placement score of 83%. Enrollment not allowed if credit already earned for MATH 140, 202, or 206. Differential and integral calculus of one variable with associated analytic geometry. Credit not granted for more than one of MATH 140, 171, 202, 206.	**8-15**
MATH	**201**	**Revise**	**Mathematics for Business and Economics** 3 Course Prerequisite: MATH 101 with a C or better, MATH 103 with a C or better, or ALEKS math placement score of ~~55%~~. Mathematical analysis using polynomial, exponential, and logarithmic functions; linear systems, linear programming and probability, for business and economic applications.	**Mathematics for Business and Economics** 3 Course Prerequisite: MATH 101 with a C or better, MATH 103 with a C or better, or ALEKS math placement score of 65%. Mathematical analysis using polynomial, exponential, and logarithmic functions; linear systems, linear programming and probability, for business and economic applications.	**8-15**
MATH	**202**	**Revise**	**[QUAN] ~~[N]~~ Calculus for Business and Economics** 3 Course Prerequisite: MATH 106 with a C or better, ~~MATH 107 with a C or better,~~ MATH 201 with a C or better, or ALEKS math placement score of ~~65%~~. Enrollment not allowed if credit already earned for MATH 140, 171, or 206. Differential and integral calculus of the polynomial,	**[QUAN] Calculus for Business and Economics** 3 Course Prerequisite: MATH 106 with a C or better, MATH 201 with a C or better, or ALEKS math placement score of 80%. Enrollment not allowed if credit already earned for MATH 140, 171, or 206. Differential and integral calculus of the polynomial, exponential, and logarithmic functions. Credit not	**8-15**

			exponential, and logarithmic functions. Credit not ~~normally allowed~~ for more than one of MATH 140, 171, 202, 206.	granted for more than one of MATH 140, 171, 202, 206.	
MATH	**206**	**Revise**	**~~[N]~~ Calculus for Architects** 3 Enrollment not allowed if credit already earned for MATH 140, 171, or 202. Calculus of elementary functions; trigonometry; applications to architecture. Credit not ~~normally allowed~~ for more than one of MATH 140, 171, 202, 206.	**Calculus for Architects** 3 Enrollment not allowed if credit already earned for MATH 140, 171, or 202. Calculus of elementary functions; trigonometry; applications to architecture. Credit not granted for more than one of MATH 140, 171, 202, 206.	**8-15**
ME	**405**	**Revise**	**Thermal Systems Design** 3 Course Prerequisite: ME ~~404~~; certified major in Mechanical Engineering, Materials Science Engineering, Civil Engineering, or Electrical Engineering. Design and analysis of thermofluid systems using principles of thermodynamics, fluid mechanics and heat transfer.	**Thermal Systems Design** 3 Course Prerequisite: ME 304; certified major in Mechanical Engineering, Materials Science Engineering, Civil Engineering, or Electrical Engineering. Design and analysis of thermofluid systems using principles of thermodynamics, fluid mechanics and heat transfer.	**8-15**
ME	**406**	**Revise**	**[M] Experimental Design** 3 (1-6) Course Prerequisite: ME 220; ~~ME 305;~~ ME 316; ~~ME 404~~. Designing, conducting, and reporting of experimental investigations involving mechanical equipment. Recommended preparation: ME 348.	**[M] Experimental Design** 3 (1-6) Course Prerequisite: ME 220; ME 304; ME 306; ME 316; certified major in Mechanical Engineering, Materials Science and Engineering, Civil Engineering, or Electrical Engineering. Designing, conducting, and reporting of experimental investigations involving mechanical equipment. Recommended preparation: ME 348.	**8-15**
ME	**416**	**Revise**	**[CAPS] ~~[T]~~ Mechanical Systems Design** 3 (1-6) Course Prerequisite: ME 316; ME 348; ~~ME 404;~~ ME 414 or concurrent enrollment; senior standing. Integrative design in mechanical engineering; multidisciplinary design project considering both technical and non-technical contexts; organizational dynamics and communications.	**[CAPS] Mechanical Systems Design** 3 (1-6) Course Prerequisite: ME 304; ME 316; ME 348; ME 414 or concurrent enrollment; senior standing. Integrative design in mechanical engineering; multidisciplinary design project considering both technical and non-technical contexts; organizational dynamics and communications.	**8-15**
STAT/ MATH	**205**	**Revise**	**[QUAN] ~~[N]~~ Statistical Thinking** 3 Course Prerequisite: MATH 101, 103, or ALEKS math placement score of ~~40%~~. Scientific	**[QUAN] Statistical Thinking** 3 Course Prerequisite: MATH 101 with a C or better, MATH 103 with a C or better, or ALEKS math	**8-15**

			explanation; correlations and causality; presenting statistical evidence; graphical and numerical methods; chance and gambling; the bell-shaped distribution. (Crosslisted course offered as STAT 205, MATH 205).	placement score of 45%. Scientific explanation; correlations and causality; presenting statistical evidence; graphical and numerical methods; chance and gambling; the bell-shaped distribution. (Crosslisted course offered as STAT 205, MATH 205).	
STAT/ MATH	**212**	**Revise**	**[QUAN]** ~~[N]~~ Introduction to Statistical Methods 4 (3-2) Course Prerequisite: MATH 101, 103, 106, 108, 140, 171, 201, or ALEKS math placement score of ~~40%~~. Introduction to descriptive and inferential statistics: t-tests, chi-square tests, one-way ANOVA, simple linear regression and correlation. (Crosslisted course offered as STAT 212, MATH 212).	**[QUAN] Introduction to Statistical Methods** 4 (3-2) Course Prerequisite: MATH 101 with a C or better, MATH 103 with a C or better, or MATH 106, 108, 140, 171, 201, or ALEKS math placement score of 45%. Introduction to descriptive and inferential statistics: t-tests, chi-square tests, one-way ANOVA, simple linear regression and correlation. (Crosslisted course offered as STAT 212, MATH 212).	**8-15**
STAT/ MATH	**447**	**Revise**	**Introduction to Time Series Analysis** 3 Course Prerequisite: ~~STAT 360 or 370~~. Introduction to the analysis and application of time series including AR, MA, ARMA, and ARIMA models. (Crosslisted course offered as STAT 447, MATH 447).	**Introduction to Time Series Analysis** 3 Course Prerequisite: STAT/MATH 423. Introduction to the analysis and application of time series including AR, MA, ARMA, and ARIMA models. (Crosslisted course offered as STAT 447, MATH 447).	**8-15**