

Category 1C: Quantitative Techniques & Understanding LAC 2014

ADVISING NOTES

Students should complete this category in their first year.

Elementary Education students may meet the category 1C requirement by completing **MATH 1204 Mathematical Reasoning for Teaching I**.

All LAC related student requests should be sent directly to the Provost's Office.

ALEKS PLACEMENT EXAMINATION

All UNI students must take the ALEKS placement examination. **MATH 1420 Calculus I**, **STAT 1772 Introduction to Statistical Methods**, and **STAT 1774 Introductory Statistics for Life Sciences** (which is not offered regularly) have ALEKS prerequisite scores.

ALEKS cut scores are considered prerequisites. Students are not allowed to enroll in a course without demonstrating the designated ALEKS score.

Additional instructions regarding ALEKS scores and course placement are located on the following pages.

PRECALCULUS AND CALCULUS

Students with previous coursework in Precalculus or Calculus are advised to complete the ALEKS Review Module and repeat the ALEKS test before enrolling for repeat coursework. The ALEKS system is designed to save students time and money.

Students without previous coursework in Precalculus or Calculus should enroll in the following courses according to their ALEKS scores and major requirements:

- MATH 1140 Precalculus or;
- MATH 1110 Analysis for Business Students and
- MATH 1130 Trigonometry or;
- MATH 1120 Mathematics for Biological Sciences and
- MATH 1130 Trigonometry

Students who prepare for Precalculus or Calculus with UNI coursework instead of ALEKS scores must contact the Math Department at 319-273-2631 for assistance registering for Precalculus and Calculus.

INTRODUCTION TO STATISTICAL METHODS

Students who do not achieve the cut score for Introduction to Statistical Methods and who have previous coursework in high school Algebra II or College Algebra are advised to complete the ALEKS Review Module and repeat the ALEKS test before enrolling for repeat coursework. The ALEKS system is designed to save students time and money.

Students without previous coursework in high school Algebra II or College Algebra should enroll in MATH 1110 Analysis for Business Students. Students who prepare for Statistics with coursework instead of ALEKS scores must contact the Math Department at 319-273-2631 for assistance registering for Statistics.

Please contact the Mathematics Department at 319-273-2631 with additional questions about math course placement.

REQUIREMENT: 3 CREDIT HOURS

CS 1025	Modern Tools for Exploring Data	3 Hours
MATH 1100	Mathematics in Decision Making	3 Hours
MATH 1420	Calculus I Required ALEKS score $\geq 76\%$	4 Hours
STAT 1772	Introduction to Statistical Methods Required ALEKS score $\geq 50\%$	3 Hours
STAT 1774	Introductory Statistics for Life Sciences Note: not offered regularly; contact Math department for appropriate ALEKS score.	3 Hours

IT TAKES MORE THAN A MAJOR

Employers tell us that **high quality learning involves more than a major**. Above and beyond what students learn in their major fields, a high-quality 21st century college education should also emphasize broad learning, personal and social responsibility, integrative and adaptive learning, and intellectual skills that support evidence-based reasoning and innovation-including **quantitative fluency** and information literacy.

Source: Hart Research Associates, *It Takes More Than a Major: Employer Priorities for College Learning and Student Success*, (Washington, DC: Association of American Colleges and Universities, 2013).

AS A RESULT OF THIS CATEGORY STUDENTS WILL ...

- Make sense of quantitative information.
- Represent and manipulate quantitative information, using standard mathematical conventions, to clarify meaning.
- Value mathematics as a natural way to approach and address questions that arise in daily life, the workplace, and society.

Notes _____

Category 1C: Quantitative Techniques & Understanding LAC 2014

COURSE DESCRIPTIONS

CS 1025 Modern Tools for Exploring Data—3 hrs. Explores use of computational tools to explore data sets, find patterns, and solve complex problems. Topics include representing problems, modeling data, simulating processes, and validating models, with applications in the sciences, social sciences, humanities, and business.

MATH 1100 Mathematics in Decision Making—3 hrs. Selection of mathematical topics and their applications with an emphasis on mathematical reasoning. Topics include probability and statistics.

MATH 1420 Calculus I—4 hrs. Limits, differentiation, introduction to integration including the fundamental theorem of calculus.

- Prerequisite(s): Satisfactory score on ALEKS exam or subsequent remediation.
- Required ALEKS score $\geq 76\%$.

STAT 1772 Introduction to Statistical Methods—3 hrs. Descriptive statistics including correlation and curve fitting. Intuitive treatment of probability and inferential statistics including estimation and hypothesis testing.

- No credit for students with credit in STAT 1774 Introductory Statistics for Life Sciences.
- Students with credit in STAT 3770 Statistical Methods should not enroll in STAT 1772 Introduction to Statistical Methods.
- Prerequisite(s): Satisfactory score on ALEKS exam or subsequent remediation.
- Required ALEKS score $\geq 50\%$.

STAT 1774 Introductory Statistics for Life Sciences—3 hrs. Descriptive statistics, basic probability concepts, confidence intervals, hypothesis testing, correlation and regression, elementary concepts of survival analysis.

- No credit for students with credit in STAT 1772 Introduction to Statistical Methods.
- Prerequisite(s): Satisfactory score on ALEKS exam or subsequent remediation.
- Note: not offered regularly; contact Math department for appropriate ALEKS score.

Notes _____

Notes _____
