

Syllabus MATH 2301 for Fall 2014

- General Information

- MATH 2301 Mathematics and Technology
- Faculty Information:
Scott Dillery
dillerys@lindsey.edu
270-384-8105
Office hours: MWF 9:30 am - 11:00, TR 2:00 pm - 3:30, R 3:30pm - 4:45

- Course Information

- Catalogue Description:
2301 Mathematics and Technology **1 credit hour**
An array of current technologies is utilized to solve mathematical problems at the level of calculus and below. Exposure to the appropriate use and limits of technology is the main objective. The course is conducted in a laboratory format and is intended for prospective math majors. *Prerequisite or Corequisite:* MATH 2315. *Grading:* Credit/No Credit.
- Required References:
 - * *TEX: A Document Preparation System*, second edition, by Leslie Lamport
Addison Wesley Longman, Inc., 1994
ISBN 10: 0-201-52983-1
 - * The R user manual found at <http://www.r-project.org/>
 - * The Sage user manual found at <http://www.sagemath.org/doc/reference/>
 - * The GeoGebra user's guide found at http://www.geogebra.org/en/wiki/index.php/GeoGebra_User%27s_Guide
- Course Objectives:
 - * To develop students' abilities to obtain mathematical results through the use of technology
 - * To develop students' abilities to communicate mathematics through the use of technology
 - * To expose students to a variety of technologies available to the mathematics community
- Student Learning Outcomes:
 - * The student will use spreadsheets and computer algebra systems to gain mathematical insight and to solve numerical problems.
 - * The student will make judgments and draw appropriate conclusions based on the quantitative analysis of data.
 - * The student will use quantitative information to support an argument or purpose of the work.
- Required Assignments:

Grade Element	Grade Factor
Laboratories	100%

Violations of the academic integrity policy include cheating, plagiarism or lying about academic matters. Plagiarism is defined as any use of another writer's words, concepts, or sequence of ideas without acknowledging that writer by the use of proper documentation. Not only the direct quotation of another writer's words, but also any paraphrase or summary of another writer's concepts or ideas without documentation is plagiarizing that writer's materials. Academic dishonesty is a profoundly serious offense because it

unauthorized aid on this assignment/exam.
 appropriate: *On my honor as a student, I have neither given nor received any*
 To foster commitment to academic integrity, faculty are asked to require each student to place and sign the following Honor Code on tests, exams and other assignments as and others, fairness and justice.

fundamental academic values: honesty, integrity, responsibility, trust, respect for self supports learning and growth requires that each student make a commitment to the integrity and academic reputation of Lindsey Wilson College Maintaining a culture that is responsible for fostering a culture of academic honesty, and for maintaining the Academic Integrity is essential to the existence of an academic community. Every stu-

Academic Integrity:

information and assistance.

Writing Center and Mathematics Center
 The Writing Center (located in the Slider Humanities & Fine Arts Building), and the Mathematics Center (located in the Fugite Science Building) are available for specialized tutoring at no charge to students. Please contact Jared Odd, Writing Center Coordinator, at 384-8209 or Linda Kessler, Math Center Coordinator, at 384-8115 for further

8037 for further information and assistance.
 evaluation or school IEP). Please contact Mareta Garner, Tutor Coordinator at 384 - documentation from an appropriate outside professional source such as a professional Wilson College students (students with learning disabilities are responsible for providing from documented learning disabilities. All services are free of charge to all Lindsey techniques. The Center also offers assistance with other academic problems resulting encouraged to utilize this Center as a resource for improving study strategies and reading in a particular course. In addition, computers are available for student use. Students are assignments, preparing for exams and improving their understanding of content covered The Academic Success Center offers peer tutoring to aid students in completing class Academic Success Center

Academic Support:

• Faculty/College Policies

- * Grading Scale: The course is Credit/No Credit.
- * There will be 10 laboratory projects which incorporate various quantitative technologies. Each laboratory will require at least one technology and on average about 4 hours to complete. At least 3 laboratories will require more than one technology to complete. All laboratory projects must be submitted on by their respective due dates. Unacceptable projects will be returned to the student to be redone. All projects must be completed and acceptable to get credit for the course.
- * Laboratories:

An explanation of each of the grade elements follows:

involved an act of fraud that jeopardizes genuine efforts by faculty and students to teach and learn together. It is not tolerated at Lindsey Wilson College.

Students who are determined to have plagiarized an assignment or otherwise cheated in their academic work or examinations may expect an F for the activity in question or an F for the course, at the discretion of the instructor. All incidents of cheating or plagiarism are reported by the instructor to the Academic Affairs Office along with copies of all relevant materials. Each instance of cheating or plagiarism is counted separately. A student who cheats or plagiarizes in two assignments or tests during the same semester will be deemed guilty of two offenses. If the evidence is unclear, or if a second offense occurs, the VP for Academic Affairs or Associate Dean to move the student before the campus Judicial Board for review. Violations will ordinarily result in disciplinary suspension or expulsion from the College, depending on the severity of the violation involved. **Note:** The College has purchased Turnitin.com, a web product used to detect plagiarized documents.

– Statement on Learning/Physical Disabilities:

Lindsey Wilson College accepts students with learning disabilities and provides reasonable accommodation to help them be successful. Depending on the nature of the disability, some students may need to take a lighter course load and may need more than four years to graduate. Students needing accommodation should apply as early as possible, usually before May 15. Immediately after acceptance, students need to identify and document the nature of their disabilities. It is the responsibility of the student to provide to the College appropriate materials documenting the learning disability, usually a recent high school Individualized Education Program (IEP) and results from testing done by a psychologist, psychiatrist, or qualified, licensed person. The College does not provide assessment services for students who may be learning disabled. Although LWC provides limited personal counseling for all students, the College does not have structured programs available for students with emotional or behavioral disabilities. For more information, call Mr. Ben Martin at 270-384-7479.

– Final Exams:

Final Exams are scheduled for the Fall 2011 semester on December 5-9 and May 7-11 for the Spring 2012 semester. The academic calendar, which contains the schedule for finals, is in the College Catalog and course schedule listing. Please make any necessary flight arrangements after the final exam week. Students will not be permitted to take early finals unless extenuating circumstances exist. "Extenuating circumstance" means illness, a verified family emergency or participation in officially sponsored travel in support of an event arranged by the College. Travel arrangements must be made in sufficient time that tickets may be obtained after final exams and the semester is officially over. All requests for early finals must be made in person to the Academic Affairs Office.

– Questioning a Grade – The Student Academic Complaint Policy:

A student, who wishes to question an assignment grade, or other academic issue, should follow the procedure below:

1. Whenever possible, the student will first go to the faculty member who has assigned the disputed grade. Complaints regarding grades should be made within seven (7) days of receipt of the disputed grade and, if possible, will be decided by the faculty member within seven (7) days of receipt. If the disputed grade is the final grade for the course, receipt is defined by when the final grade is posted online by the registrar. (Please refer to the next section for appealing a final grade.)

2. Unless there are extenuating circumstances, the student may, within seven (7) days request in writing a review of such decision by the Chair of the division in which the grade was assigned. Upon receipt of such request, that Chair will direct the faculty member and the student to each submit, within seven (7) days, if possible, a written account of the incident, providing specific information as to the nature of the dispute.

3. Upon receipt of these written accounts, the Chair will meet, if possible, within seven (7) days with the faculty member and the student in an effort to resolve the dispute and will render his or her decision in writing.

4. If either the student or the faculty member desired to appeal the decision of the Division Chair, the student or faculty member may, within seven (7) days by written request to the chair, ask that the matter be reviewed by a Grade Appeals Panel convened by the Academic Affairs Office.

5. If the disputed grade is assigned at the end of a fall or spring semester and the student and faculty member cannot meet to resolve the issue, the student should contact the faculty member by e-mail within seven (7) days of receipt of the disputed grade. If the issue cannot be resolved by e-mail within the time limit, steps 2, 3, and 4 of the appeal may extend into the beginning of the semester immediately following receipt of the disputed grade by following the timeline above.

A student who wishes to question a final grade should follow the procedure below:

1. Confer with the faculty member who assigned the disputed grade.
2. If the disputed cannot be resolved, a written request for a grade appeal must be submitted to the Academic Affairs Office before the first day of the semester following the one in which the grade was issued. The written request must include the specific bases for the appeal.
3. The Academic Affairs Office will convene a Grade Appeals Panel, comprised of the Vice President for Academic Affairs, the Associate Academic Dean, and the chair of the academic unit which houses the course for which the grade is appealed. If one of the members is the faculty member who issued the grade, an alternate will be appointed. The student and the faculty member may appear separately before the panel to explain their positions. The hearing is non-adversarial. Neither the faculty member nor the student may be accompanied by other individuals to the meeting of the Grade Appeals Panel. The Grade Appeals Panel will notify the student of its decision, if possible, within seven (7) days of the meeting.

Cell Phone Policy:

Student cell phones will be off during class time unless prior arrangement is made with the instructor.

Adding/Dropping a Course:

Students enrolled in the following courses cannot drop these classes during the semester: READ 0713, 0723, 0733, 0903, 1013, and 1023; STSK 1003; ENGL 0903 and 0904; and ESL 0803, 0804 and 0854.

For undergraduate classes at the Columbia campus, adding a course, dropping a course, or changing from one section of a course to another section of the same course requires the approval of the advisor and the instructor for each course involved as indicated on the Add/Drop Form. The change must be reported to the Business Office and the Registrar's Office on an Add/Drop Form, which may be obtained from the Registrar's Office. For

AIM courses, adding a course, dropping a course, or changing from one section of a course to another section of the same course requires the approval of the Director of the Evening Program. For courses taught at Community sites, adding a course, dropping a course, or changing from one section of a course to another section of the same course requires the approval of the Site Coordinator for the campus. Permission to add courses will not be given after the last date for late registration. Authorization for dropping a course will not be approved after more than 75% of the instructional days for a course are completed, as outlined below:

Course	Deadline	Submitted by the Student to
Columbia undergraduate and graduate full semester courses	Not later than 30 days before the end of the semester	Registrar
AIM courses	By the sixth week of class	Director of the AIM Program or the Registrar
Courses at Community Campuses	By the third weekend of class	Site Coordinator or the Registrar

If changes are not properly approved and officially reported as stated above, students will receive a grade of F in the courses for which they are officially registered, and they will be charged for all such courses. Students will not receive credit for changed or added courses unless they officially register for those courses.

- Course Topics, Assignments, and Exams

- Tentative Laboratories:

1. L^AT_EX document preparation with text
2. L^AT_EX document preparation with data and graphics
3. Model building with a spreadsheet
4. Model building with Sage a computer algebra system
5. Creating random numbers for general distributions using Sage and spreadsheet
6. Dealing with large data sets
7. Using ANOVA with R and spreadsheet
8. Dynamical system simulation
9. Graphical tools in problem solving
10. Animation in problem solving

- Important Dates:

- January 13, 2014 - AIM S1 classes begin
- January 15, 2014 - Day classes begin
- January 17, 2014 - Last day to register or add an AIM S1 class
- January 20, 2014 - Martin Luther King Holiday (No Classes)
- January 22, 2014 - Last day to register or add a day class
- February 24, 2014 - Last day to drop/withdraw from an AIM S1 class
- March 10, 2014 - Midterm grades due
- March 10-14, 2014 - Spring break, (No Classes)
- March 17, 2014 - AIM S2 classes begin
- March 21, 2014 - Last day to register or add an AIM S2 class
- March 24-March 27, 2014 - Junior/Senior Advance registration for Fall 2014

March 31-April 4, 2014 - Freshman/Sophomore Advance registration for Fall 2014
April 7, 2014 - Last day to drop/withdraw from a class
April 18, 2014 - Good Friday Holiday, (No Classes)
April 24, 2014 - Honors Convocation and Founders Day
April 28, 2014 - Last day to drop/withdraw from an AIM S2 class
May 2, 2014 - Last day of classes
May 5-9, 2014 - Final Examinations
May 9, 2014 - Spring term ends
May 9, 2014 - Senior grades due
May 9, 2014 - Baccalaureate
May 10, 2014 - Commencement
May 12, 2014 - Final grades due