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**Math 304 – 01**
**Linear Algebra**
`https://goo.gl/8jTNC2`

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| **Fall 2017** | MWF | 8:00 | - | 9:30 | a.m. | SW-214 | |

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| **Instructor**: | Fernando Guzmán | | x-72876 | WH-116 |
| | e-mail: | fer@math.binghamton.edu | | |

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| **Office hours**: | T | 12:00 | - | 1:00 | p.m. |
| (subject to change) | W | 3:00 | - | 4:00 | p.m. |
| | F | 12:00 | - | 1:00 | p.m. |
| | or by appointment | | | | |

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| Textbook: | Math 304 - Linear Algebra |
| | M. Brin and G. Marchesi |
| Add/Drop deadline: | Tuesday    Sep.    05 |

**Grading**: the course grade will be based on:

- quizzes
- class participation,
- online homework,
- two midterms tests, and
- cumulative final exam.

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| Online homework | | | | | 5% |
| Quizzes & class participation | | | | | 15% |
| Test 1 | Wed. | Oct. | 04 | (evening) | 20% |
| Test 2 | Wed. | Nov. | 08 | (evening) | 20% |
| Final Exam | Thu. | Dec. | 14 | 5:40-7:40 | 40% |

This course is a 4-credit course, which means that in addition to the scheduled lectures, students are expected to do at least 9.5 hours of course-related work each week during the semester. This includes things like: completing assigned readings and homeworks, studying for tests and examinations, and other tasks that must be completed to earn credit in the course.

The driving topic in this course is the solution of systems of linear equations. We will learn the theory, the practice (calculations) and applications of this. Along the way, we will learn new vocabulary (definitions) e.g. matrix, rank; new facts (theorems) e.g. the rank-nullity theorem; new methods (algorithms) e.g. row-reduction method; and we will also talk about applications of linear algebra to other areas of knowledge.

By the end of the semester students are expected to know enough linear algebra to:

- solve systems of linear equations,
- relate properties of a matrix with properties of the corresponding linear system,
- relate properties of a matrix with properties of the corresponding linear transformation,
- find the eigenvalues and eigenspaces of a matrix,
- diagonalize a symmetric matrix.

We plan to cover most of the material in chapters 1 – 6, following closely the order and logic framework of the textbook. If time allows, we will cover some of the material in chapter 7.