

Course Learning Outcomes for Math 46100 Differential Geometry

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| 1. understand and prove properties of curves in space | a,c,e1,e2,f,g |
| 2. understand and prove properties of surfaces in space | a,c,e1,e2,f,g |
| 3. understand fundamental notions for geodesics and curvature | e1,e2,f,g |
| 4. use mathematical software to model geometric relationships | a,d |

Course assessment tools

1. homework assignments, quizzes, participation
2. in-class exams
3. final exam

Departmental aims:

The mathematics department, in its varied courses, aims to teach students to:

- a. perform numeric and symbolic computations
- b. construct and apply symbolic and graphical representations of functions
- c. model real-life problems mathematically
- d. use technology appropriately to analyze mathematical problems
- e. state (e1) and apply (e2) mathematical denitions and theorems
- f. prove fundamental theorems
- g. construct and present (generally in writing, but, occasionally, orally) a rigorous mathematical argument.