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|---|--|---|---------------------------|--|---|---|---|
| <b>Course Number</b>                                      | <b>CS 572</b>  |   | <b>Course Title</b>       | <b>Advanced Topics in Numerical Analysis</b> |   |   |   |
| <b>Semester Hours</b>                                     | <b>3</b>   |   | <b>Course Coordinator</b> | <b>MATH</b>                                  |   |   |   |
| <b>Catalog Description</b>                                | Selected advanced topics in numerical analysis chosen from such areas as: approximation theory; spline theory; special functions; wavelets; numerical solution of initial value problems; numerical solution of boundary value problems; numerical linear algebra; numerical methods of optimization; and functional analytic methods. |   |                           |  |   |   |   |
| <b>Textbooks</b>  |  |   |                           |  |   |   |   |
| <b>References</b>   |  |   |                           |  |   |   |   |
| <b>Course Learning Outcomes</b>                           |  |   |                           |  |   |   |   |
| <b>Assessment of the Contribution to Student Outcomes</b> |  |   |                           |  |   |   |   |
| <b>Outcome →</b>  | 1  | 2 | 3                         | 4  | 5 | 6 | 7 |
| <b>Assessed →</b>   | X  |   | X                         |  | X |   |   |
| <b>Prerequisites by Topic</b>                             |  |   |                           |  |   |   |   |
| Special approval needed from the instructor.              |  |   |                           |  |   |   |   |

**Major Topics Covered in the Course**

This course which has been irregularly offered is intended as a special topics course with the specific content chosen by the instructor in accord with the background of the students. The specific selections would provide for deeper treatments of some of the major topics listed in CS 475.