

Institution Name: Cornell College
Date approved: November 2007
Updated date: January 26, 2007

ENDORSEMENT NO. 143

DATE OF PROGRAM:

IAC 14.141(13)b

September 3, 2007

Mathematics

GRADE LEVEL: 5-12

February 2006

Professional Education Core:

Requirements unique to this endorsement:

| STATE REQUIREMENTS Professional Core | INSTITUTIONAL REQUIREMENTS Course(s) for Demonstrating Competencies |
|---|--|
| Methods of teaching with an emphasis in Mathematics | EDU 324 Secondary Mathematics, Science and Social Studies EDU 328 Reading in the Content Area |
| Student Teaching in Mathematics | EDU 410, 420, 430, 440 Student Teaching |

Content: Completion of 24 semester hours in mathematics to include a linear algebra or an abstract (modern) algebra course, a post-calculus geometry course, a two course sequence in calculus, a computer programming course, a probability and statistics course, and coursework in discrete mathematics.

| STATE REQUIREMENTS Content Categories | INSTITUTIONAL REQUIREMENTS Course Numbers and Titles | Credit Hrs. | |
|--|---|--------------------|-------------------|
| | | Opt. 1 | Opt. 2 |
| Linear Algebra OR Abstract (Modern) Algebra | MAT 221 Linear Algebra OR MAT 327 Modern Algebra I | 4 | 4 |
| Postcalculus Geometry | MAT 231 Fundamentals of Geometries | 4 | 4 |
| 2 course sequence Calculus | MAT 121 Calculus of a Single Variable AND MAT 122 Calculus of Several Variables AND MAT 236 Differential Equations | 12 | 12 |
| <i>Discrete Math</i> | CSC 151 Discrete Mathematics for Computer Science | 4 | 4 |
| Computer Programming | CSC 140 Foundations of Computer Science | 4 | 4 |
| Probability and Statistics | INT 201 Statistical Methods <u>OR</u> MAT 347 Mathematical Statistics I AND MAT 348 Mathematical Statistics II | 4 | 8 |
| Other | MAT 301 Intro to Proof: Number Theory AND MAT 327 Modern Algebra I <u>OR</u> MAT 337 Analysis I | 4 | 4 |
| | | 4 | 4 |
| | Two ADDITIONAL courses from the following IF MAT 347, 348 not taken in above sequence: MAT 317 Mathematical Modeling MAT 328 Modern Algebra II MAT 338 Analysis II MAT 327 Modern Algebra I OR MAT 337 Analysis I if not taken before | 8 | |
| TOTAL Credit Hours | | 48 | 44 |

OR

Option 2 (over)

| STATE REQUIREMENTS Content Categories | INSTITUTIONAL REQUIREMENTS Course Numbers and Titles | Credit Hrs. | |
|--|--|-------------|-----------|
| | | Opt. 1 | Opt. 2 |
| Linear Algebra OR Abstract (Modern) Algebra | MAT 221 Linear Algebra OR MAT 327 Modern Algebra I | 4 | 4 |
| Postcalculus Geometry | MAT 231 Fundamentals of Geometries | 4 | 4 |
| 2 course sequence Calculus | MAT 121 Calculus of a Single Variable AND MAT 122 Calculus of Several Variables | 8 | 8 |
| <i>Discrete Math</i> | CSC 151 Discrete Mathematics for Computer Science | 4 | 4 |
| Computer Programming | CSC 140 Foundations of Computer Science | 4 | 4 |
| Probability and Statistics | INT 201 Statistical Methods <u>OR</u> MAT 347 Mathematical Statistics I AND MAT 348 Mathematical Statistics II | 4 | 8 |
| Other | MAT 301 Intro to Proof: Number Theory AND MAT 327 Modern Algebra I <u>OR</u> MAT 337 Analysis I | 4 | 4 |
| | Cornell teaching major in another field | 4 | 4 |
| TOTAL Credit Hours | | 36 | 40 |