MAJOR
Teaching Mathematics can be an interesting and rewarding career choice. The material is challenging and teaching presents the opportunity to work with young people filled with enthusiasm and vitality. Strong demand continues for teachers in Mathematics. Students are sometimes surprised to find that their Math Education major is sought out by employers outside the field of education. Employers recognize that students successfully completing a math education program have good analytical skills, know how to work with people, and are able to manage activities. These characteristics are sought by government, industry, and business. In past years, math education students are usually under contract with a school system prior to graduation.

STUDENT TEACHING
As a math education major you are placed into schools for a series of field experiences including Introduction to Education (40 hours); Practicum (80 hours); Culturally Diverse Practicum (25 hours involving 3 consecutive full days in a classroom), and a twelve-week student teaching field experience completed in a location that works well for the student and university. Student teaching is the culminating experience of the program and the opportunity for students to apply all they have learned regarding their classroom preparation and field experience opportunities.

QUOTE
“VCSU prepared me to become a well-rounded teacher by setting up observations and practicums with very good classroom teachers whom I could learn so much from.”

Trevar Hansen
2004 VCSU Grad
Math Teacher at Valley City High School

TEACHER EDUCATION REQUIREMENTS
You are typically admitted into Teacher Education during your sophomore year or beginning of your junior year of college. Criteria for Admission to Teacher Education can be found at the following website:
www.vcsu.edu/undergrad_ed/

ACCREDITATION
• National Council for Accreditation of Teacher Education (NCATE)

TECHNOLOGY
• Notebook computers with DVD burners and multimedia capabilities
• Digital cameras, video cameras, and other peripherals
• Blackboard online learning environments
• Promethean Interactive Whiteboards
• GeoGebra: Dynamic mathematics software that joins algebra, geometry, and calculus
• Maple: Mathematical & analytical software
• TI graphing calculators, TI Presenter, TI CBR2 Motion Detector
• Microsoft Excel spreadsheets
• Online interactive math applets

CAREER SERVICES PROVIDES
• Career, job search, placement services free to all students
• Field trips, employer on-campus visits
• Information, networking opportunities and skill development
• Visit www.vcsu.edu/careerservices/
Mathematics Education

MAJOR
Teaching mathematics can be an interesting and rewarding career choice. Strong demand continues for teachers in mathematics. In recent years, most math education students have been under contract with a school district prior to graduation. Also, math education majors are often sought by employers outside of education who recognize that students successfully completing a math education degree possess strong analytical skills, people skills, and activity management skills. These characteristics are sought by government, industry, and business.

LEARNING OUTCOMES
The following outcomes are based on the North Dakota Education Standards and Practices Board State Program Approval Standards.

1. Students will demonstrate the ability to make mathematical connections and properly use mathematical problem solving, reasoning, communication, and representation.
2. Students will demonstrate an understanding of both secondary school mathematics and core college mathematics including the history and philosophy of math and basic computer programming.
3. Students will demonstrate appropriate use of technology and concrete materials for building understanding of mathematical concepts.
4. Students will demonstrate the ability to use a variety of teaching methods and assessment strategies.

ABILITIES

Problem Solving
Obtain, organize, and interpret information to provide creative, critical solutions

Collaboration
Ability to work with others

Global Awareness
Recognize relationships

Communication
Ability to convey information and knowledge

Technology
Use, understand, and implement to provide solutions in an information society.

For degree and graduation requirements see pages 39-40.

General Education Requirements 40 Hrs

Communication & Collaboration 9 hrs
ENGL 110 College Composition I
ENGL 120 College Composition II or ENGL 125 Intro to Professional Wrtg
COMM 110 Fund of Public Speaking or COMM 212 Interpersonal Comm or COMM 216 Intercultural Comm

Problem Solving 12 hrs
Mathematics - 4 crs (Select one course) MATH 165 Calculus I * 4
Lab Science - 8 crs (Select two courses) Encouraged to take Chemistry or Physics BIOL 111, 150, 151, 170, 220, 221
CHEM 115, 116, 121, 122
GEOL 100, 106
PHYS 100, 110, 161, 162, 251, 252
TECH 161

Technology (Select one course) 3 hrs
CSI 127 Intro to Programming in Java *
CSI 160 Intro to Structured Programming *

Wellness 2 hrs
HPER 100 Concepts Fitness & Wellness

Aesthetic Engagement 6 hrs
Literracies - 3 crs (Select one course) ENGL 220, 225, 241, 242, 261, 262
HUM 201 Civil, Thought, & Lit Heritage
SPAN 201 2nd Yr I; SPAN 202 2nd Yr II
THEA 110 Intro Theatre; THEA 161 Acting I

Art & Music - 3 crs (Select one course) ART 110 Introduction to Visual Arts
HUM 202 Fine Arts & Aesthetics
MUS 100 Music Appreciation
MUS 101 Music Fundamentals
MUS 207 History of Rock’n’Roll

Global Awareness & Effective Citizen 6 hrs
(Select two courses) COMM 112 Under Media; COMM 114 Human;
ECON 201 Prin Micro; ECON 202 Prin Macro
GEG 151 Human Geog
HIST 103, 104, 211, 212, 260, 267, 270
POLS 115 Amer Gov; POLS 116 State Gov
PSYC 111 Intro Psych **
SOC 110 Intro to Soc; SOC 111 Intro Anthro

Additional General Education 2 hrs
Select one additional course from the area of Aesthetic Engagement or Global Awareness or
ART 112 (3), ART 231 (3), ART 281 (3), GEG 111 (2), MUS 104 (1), MUS 105 (1), MUS 131 (1), MUS 141 (1), PHYS 275 (1), THEA 201 (1-3)
*Required
**Required as pre-requisite for PSYC 250

Required Courses 40 Hrs
MATH 105 Trigonometry 2
MATH 166 Calculus II 4
MATH 265 Calculus III 4
MATH 266 Intro to Differential Equations 3
MATH 300 Symbolic Logic 1
MATH 330 Linear Algebra & Matrices 3
MATH 331 Euclidean Geometry & topics 3
MATH 340 Algebraic Structures I 4
MATH 390 PCK for Sec School Math 3
MATH 400 History & Philosophy of Math 3
MATH 410 Real Analysis 3
MATH 421 Mathematical Prob & Stats I 3
MATH 490 Teaching Sec School Math 3
MATH 491 Senior Portfolio 1

Professional Education Sequence 31-32 Hrs
EDUC 240 Educating Exceptional Stdnts 2
EDUC 250 Introduction to Education 3
EDUC 283 Understoryng Cult Div in Educ 3
EDUC 300 Educational Technology 2
EDUC 352 Culturally Diverse Practicum or EDUC 464 Pract in ELL Classroom 2
EDUC 351 Sec Practicum & Clsrn Mngt 1
EDUC 375 Tchg Rdg in Content Areas 2
EDUC 400 Educational Psychology 2
EDUC 450 Trends in Assess & Educ Issues 2
EDUC 480 Student Teaching (Sec) 10**
PSYC 250 Developmental Psychology 3
***Courses to be taken the same semester

Total General Education 40 Hrs
Total Major Requirement 40 Hrs
Total Professional Ed Sequence 31-32 Hrs
Total Credits Needed to Graduate 120 Hrs

Department Chair
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