



0 7/27

Minnesota State University, Mankato HOLD and CLEAR buttons only compatible with Acrobat V. 4 and 5

Curriculum Proposal

Please type or select the requested information. Print completed forms, add appropriate paper attachments, and route through MSU's curricular process for recommendations and decisions.

(Check all that apply):		Proposal #	214
College:	Science, Engineering and Technology	<input checked="" type="checkbox"/> Undergraduate	Effective Date of Change:
Department:	Computer Science	<input type="checkbox"/> Graduate	Academic Year
Program:	Computer Science	CIP # 11.010104	06-07
		(For Office Use Only)	
Type of Change	COURSE PROPOSALS	Course Designator and Number	Number of Credits
Proposed:	Designator Change/ Pre-req change	COMS 171	2
Title Current:	Introduction to C++ Programming	CS 171	2
Title Proposed:	Introduction to C++ Programming	(if applicable)	
24-Char. Abbrev:	Intro to C++ Programming		

Include a course or program description for the Bulletin (30-40 words maximum for courses, 100 for programs):

This course provides an introduction to programming using C++. Emphasis on structured programming concepts, with a brief discussion of object-oriented programming. Control structures, expressions, input/output, arrays and functions.
 Pre: MATH 113 or MATH 115
 Fall, Spring

Rationale or Justification for change:

The designator change is related to the CS program redesign. The addition of a MATH pre-requisite is an official version of what has been recommended for the last two years.

*****For General Education or Cultural Diversity Courses Only*****

<p style="text-align: center;">General Education Course:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">GE Category #</th> <th>GE Category Name (Maximum of 3 Categories)</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">N/A</td><td></td></tr> <tr><td style="text-align: center;">N/A</td><td></td></tr> <tr><td style="text-align: center;">N/A</td><td></td></tr> </tbody> </table> <p>? For Writing Intensive Courses, attach a description of the kind and quantity of writing. ? For Upper Division Courses, include a description of the respects in which it is broad and general rather than narrow and specific, and so suitable as GE.</p> <p>Attach paper copies of the following: a. Syllabus or course outline. b. Course's student learning outcomes associated with each GE competency or CD designation. c. List of strategies to be used to assess students' achievement of each GE competency or CD designation.</p>	GE Category #	GE Category Name (Maximum of 3 Categories)	N/A		N/A		N/A		<p style="text-align: center;">Cultural Diversity Course:</p> <p style="text-align: center;">(Please check one.)</p> <p><input type="checkbox"/> Core (At least 75% devoted to topics of race, gender, sexual orientation, age, class, and disabilities as they occur in United States Society.)</p> <p><input type="checkbox"/> Related (At least 25% devoted to the above topics or to a global perspective on topics related to African American, Asian, Hispanic, and Native American inhabitants of the United States.)</p>
GE Category #	GE Category Name (Maximum of 3 Categories)								
N/A									
N/A									
N/A									

*****For New Courses*****

(Check all that apply):	Instructional Type:	Lecture/Lab	Course will be offered:
<input type="checkbox"/> Course is an elective.	Grading Format:	<input checked="" type="checkbox"/> Grade <input type="checkbox"/> P/N	<input checked="" type="checkbox"/> Fall Semester
<input checked="" type="checkbox"/> Course is required for program		AET, CET, EET, MET	<input checked="" type="checkbox"/> Spring Semester
<input checked="" type="checkbox"/> Pre- or Co-requisites:		Prerequisites: MATH 113 or MATH 115	<input type="checkbox"/> Summer Session
<input type="checkbox"/> Other courses are being changed or eliminated. (Explain.) _____			
<input type="checkbox"/> Course content or title is similar to courses in other departments. (Attach copy of letter of agreement with other program(s) contacted. Indicate the nature of the discussions and/or resolution of differences or potential conflicts.)			
Attach paper copies of the following:			
a. Syllabus or course outline.			
b. Course's student learning outcomes.			
c. A list of resources required to offer and support this course.			
d. A description of how teaching this course will affect department staffing.			
e. If 400/500 level course, an explanation of added expectations of graduate students.			



Minnesota State University, Mankato
Curriculum Proposal

Signature Page

Department

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

Daniel J. Acyeli 10/17/06
Department Chair Date

Comments:

College Curriculum Committee

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

Kam C. Chau 11/2/06
Committee Chair Date

Comments:

College Dean

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

[Signature] 11/6/06
Dean Date

Comments:

General Education Subcommittee

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

General Education Subcommittee Chair Date

Comments:

Undergraduate Curriculum and Academic Policy Committee

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

[Signature] 1-31-07
UCAP Faculty Chair Date

Comments:

Faculty Association Graduate Committee

Recommended
 Not Recommended

Faculty Association Graduate Chair Date

Comments:

Graduate Dean

Recommended
 Not Recommended

Graduate Dean Date

Comments:

Academic Affairs Council

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

Daniel Flannery 2/9/07
Assistant Vice President Date

Comments:

Senior Vice President and Vice President for Academic Affairs

Approved (Category/ies _____)
 Not Approved (Category/ies _____)

[Signature] 2/13/07
Sr. Vice President / Vice Pres. Academic Affairs Date

Comments:

CS 171: Introduction to C++ Programming

Course Description: This two-credit course provides an introduction to programming using C++. Emphasis is on structured programming concepts, with a brief discussion of object-oriented programming. Control structures, expressions, input/output, arrays, and functions will be covered.

1.5 lecture hours per week, 1 lab hour per week

Pre-requisites: MATH 113 or MATH 115.

Current Text: *Engineering Problem Solving with C++*, Delores M. Etter & Jeanine A. Ingber, Prentice Hall, 2003.

Schedule of Topics:

Please see attached schedule.

Student Outcomes:

Students will be able to:

- 1) Describe programming concepts such as functions, variable declaration, assignment operations, selection structures (e.g., if-then-else statements), repetition structures (e.g., for loops), arrays and pointers.
- 2) Develop algorithms that use the above concepts.
- 3) Solve numeric problems using C++.
- 4) Write, compile, run and debug C++ programs.
- 5) Describe object-oriented concepts.

Grading Method:

Homework and Lab work: 40%

Midterm Exams: 40% These exams will be written and practical (lab based).

Final exam: 20%

Required Resources & Departmental Staffing

Resources currently in place within the department, the college, and the university library will support this new course. No new resources are required.

There is no impact on staffing requirements.

COMS 171, Fall 2006, Schedule

MONTH	MON	TUE	WED	THURS	FRI	Notes
August	28	29 Intro & Problem Solving	30	31 Hello World! Lab setup	1	
September	4 Labor Day	5 Hardware/Software/ Languages & Software Design	6	7 Code Reading/ Learning Style Inventory	9	
	11	12 Binary numbers & data types	13	14 Lab submission/ input/output	15	
	18	19 Numbers, data types, data storage & variables	20	21 Application	22	
	25	26 Variable assignment & operators	27	28 Output manipulation	29	
October	2	3 Selection Structures (if statements)	4	5 Exam Review	6	
	9	10 EXAM 1 (written)	11	12 EXAM 1 (practical)	13	
	16	17 Repetition Structures (loops)	18 Career & Internship Expo	19 Application	20	
	23	24 Repetition Structures (more loops)	25	26 Mathematical expressions & loops	27 Faculty Duty Day	
	30	31 Input/output with files	1	2 Applications/ Flowchart Hopscotch	3	
November	6	7 Modular Code Design (Functions)	8	9 The Function Game	10	
	13	14 EXAM 2 (written)	15	16 Work on Exam 2 (practical)	17 4pm: turn in practical	November 15: Last day for withdrawal with a "w".
	20	21 Review of Exam 2 & work with flowcharts	22	23 Thanksgiving	24 Break	
	27	28 Data Storage: Arrays	29	30 Arrays & Functions	1	
December	4	5 Data Storage: 2D Arrays	6	7 Final Review & Questions	8	
	11	12	13 Final Exam 2:45 -4:45	14	15	TBA Review Session on Monday or Tuesday

Haglin, David

From: Hudson, William B
Sent: Tuesday, October 17, 2006 3:43 PM
To: Haglin, David
Subject: RE: Another email of support

David,

I am supportive of proposed change in pre-requisites for COMS 171. I believe that this change will enhance student learning in this course and will support the educational missions of our programs.

Bill Hudson
Chair ECET Department