



**Morehead State University
College of Business and Public Affairs
School of Business Administration, Information Systems**

CIS 305 Advanced Programming – C++ (Fall 2009)

Instructor Information

Name: Euijin Kim, Ph.D.
Office: Combs 114C
Phone: 606) 783-9357
Email: e.kim@moreheadstate.edu
Office Hours: **Tuesday 10:20 – 11:20, 3:00 – 6:00**
Thursday 10:20 – 11:20, 3:00 – 4:00

Course Information Description

A continuation of CIS 205, with an emphasis on object-oriented methodologies, modular program design, reusable and extensible components, cross-platform compatibility, and stream manipulations. Numerous hands-on programming assignments are used to help the students build proficiency as a computer programmer.

Prerequisites: CIS 205 or CS 303 or consent of instructor

COMMUNITY ENGAGEMENT: A LIGHT TO AND FROM THE MOUNTAINS

The Professional Education Unit at Morehead State University delivers rigorous, high quality programs that prepare professionals informed by best national and international scholarship, plus research, literature, and experiences specific to Appalachia- preparing professionals to improve the schools, quality of life, and the communities in which they live and serve. This statement is not only the strategic mission for the College, but it also incorporates the conceptual framework that guides all our activities.

CONCEPTUAL FRAMEWORK OUTCOMES (CFOs):

The Unit and the faculty within individual programs assess the degree to which its graduates:

1. Master the content knowledge, professional and the twenty – first century skills need to make an

2. Are competent in the collection and use of data to inform decision – making and to demonstrate accountability for student learning.
3. Demonstrate professional dispositions
4. Are culturally competent and understand the regions from which they have come utilizing knowledge and experiences to effectively “bridge the gaps” (economic, achievement, and geographic) ensuring optimal learning for all students.
5. Engage in authentic field experiences in collaboration with committed school – based partners and are empowered to improve the quality of education throughout this region and beyond.



STUDENT LEARNING OUTCOMES (SLOs): BY THE END OF THIS COURSE, CANDIDATES WILL BE ABLE TO:

1. Understand basic principles of Object-oriented Design and Programming
2. Design, code, compile and execute a working program based upon Object-oriented programming methodologies, which solves a real business problem.
3. Working proficiently with multiple file programming projects in an advanced Integrated Development Environment (IDE)

Evaluation:

Category	Points*
Exams	120
Assignments	40
Participation (Attendance)	100
Project	40
Total	300

Points earned**	Grade
270 or more	A
240 or more, but less than 270	B
210 or more, but less than 240	C
180 or more, but less than 210	D
Less than 180	E

*The points’ allocation may change if necessary.

The final grade will be given according to the total points that each student would earn as shown in the following table.

**The ranges of the points earned may change if necessary

NCATE/ EPSB Accreditation Alignment of SLOs and CFOs

Program: Computer Science Endorsement Grades 8-12					
Aligned with → Assessment	Kentucky Teacher Standards (KYS)	Kentucky Education Reform Act (KERA)	Education Professional Standards Board (EPSB) Themes	International Society for Technology in Education (NETS)	NCATE
Exams 120 points CFO: 1 SLO: 1, 2, 3	1, 2, 4, 5, 6	2, 6	N/A	2	1
Assignments 40 points CFO: 1 SLO: 1, 2, 3	1, 2, 4, 5, 6	2, 6	Assessment	2	1
Participation 100 points CFO: 1 SLO: 1, 2, 3	1, 2, 4, 5, 6	2, 6	Assessment	2	1
Project 40 points CFO: 1 SLO: 1, 2, 3	1, 2, 4, 5, 6	2, 6	Assessment	2	1

Assignment Descriptions

Program: Computer Science Endorsement Grades 8-12	
Assessment (point value)	Description
Exams 120 points	Students will be tested on textbook and hands-on assignments related to Advanced C++ programming skills.
Assignments 40 points	This course requires students to read the textbook and course materials (to be distributed in class) thoroughly and do hands-on practice with the examples in the textbook (and the extra materials). In class, the instructor will demonstrate the basics of C++ programming and advanced procedures.
Participation 100 points	Students are required to attend every class and come prepared to participate in the hands-on activities.
Project 40 points	Students will design, code, compile and execute a working program based upon Object-oriented programming methodologies, which solves a real business problem.

Teaching Method and Evaluation

This course requires students to read the textbook and course materials (to be distributed in class) thoroughly and do hands-on practice with the examples in the textbook (and the extra materials). In class, the instructor will demonstrate the basics of C++ programming and advanced procedures. These (as well as the contents of the textbook) will be tested in the assignments and exams. Furthermore, students should diligently type in the code

Students are required to attend every class (missing 20 or more percent of the total classes hours will lead to a failure in this course). Before attending class, students are expected to have read the assigned part of the textbook. Intensive hands-on practices are also important to understand and master the technologies. The activities shown in the following table will be used to provide each student's final grade.

Campus Safety Statement: Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at www.moreheadstate.edu/emergency.

Academic honesty: Cheating, fabrication, plagiarism or helping others to commit these acts will not be tolerated. Academic dishonesty will result in severe disciplinary action including, but not limited to, failure of the student assessment item or course, and/or dismissal from MSU. If you are not sure what constitutes academic dishonesty, read *The Eagle: Student Handbook* or ask your instructor. The policy is located at <http://www.moreheadstate.edu/files/units/dsl/eaglehandbook/studenthandbook2008-09.pdf> [pgs.11 & 39]. For example, copying information from the Internet is plagiarism if appropriate credit (i.e., citation) is not given.

Policy for Accommodating Students with Disabilities: Professional staff from MSU Academic Services Center (ASC) coordinates efforts to address accessibility needs and class accommodations with instructors of students who have learning or physical disabilities. Faculty will cooperate with the ASC staff to accommodate the needs of students taking departmental courses.

Policy on Late Submission and Missing Exams or Quizzes: Assignments which are submitted after the due date will not be accepted. Makeup exams or quizzes will not be given in any circumstances. The only exception is when an official document with authoritative signature is provided.

Technology Requirements: Students will need access to a personal computer and Internet (WWW) connection with electronic mail. For more information on technology requirements for online courses, students should refer to the MSU IT website (<http://www.moreheadstate.edu/it/>).

Week	Contents	Assignments
1	Introduction	Chapter 1, 2, 3
2	C++ Basics 1	Chapter 1, 2, 3
3	C++ Basics 2	Chapter 4, 5
4	Review Exam 1	
5	Functions	Chapter 6
6	Arrays	Chapter 7
7	Searching & Sorting Algorithm	Chapter 8
8	Pointers and Dynamic Arrays	Chapter 9
9	Review Exam 2	
10	Handling Characters & Strings	Chapter 10
11	Structures	Chapter 11
12	C++ Classes 1	Chapter 13
13	C++ Classes 2	Chapter 14
14	Review Exam 3	
15	C++ Classes 3	Chapter 15
16	Exceptions, Templates, & STL	Chapter 16
17	Exam 4	Project Due

**Temp
orary
Sched
ule**

***** The
instructo
r
reserves
the right
to
change
any
portion
of this
syllabus
at any
time.**



Conceptual Framework

Community Engagement: A Light to and from the Mountains

The Professional Education Unit at Morehead State University delivers rigorous, high quality programs that prepare professionals informed by best national and international scholarship, plus research, literature, and experiences specific to Appalachia- preparing professionals to improve the schools, quality of life, and the communities in which they live and serve. This statement is not only the strategic mission for the College, but it also incorporates the conceptual framework that guides all our activities.

Conceptual Framework Outcomes (CFO's):

The Unit and the faculty within individual programs assess the degree to which its graduates:

- Master the content knowledge, professional and the twenty – first century skills need to make an optimal contribution to “whole” student learning in education settings.
- Are competent in the collection and use of data to inform decision – making and to demonstrate accountability for student learning.
- Demonstrate professional dispositions
- Are culturally competent and understand the regions from which they have come utilizing knowledge and experiences to effectively “bridge the gaps” (economic, achievement, and geographic) ensuring optimal learning for all students.
- Engage in authentic field experiences in collaboration with committed school-based partners and are empowered to improve the quality of education throughout this region and beyond.

NCATE/ EPSB Accreditation Alignment of SLO's and CFO's

Program: Business and Marketing Education, Grades 5-12, BIS 499C				
Aligned with →	Kentucky Teacher Standards (KYS)	Kentucky Education Reform Act (KERA)	Education Professional Standards Board (EPSB) Themes	National Business Education Association and Marketing Education
Content Knowledge	1, 2, 4, 5, 6	2, 6	Diversity Assessment Literacy/Reading Achievement Gap	All content areas



Assignment Descriptions

Program: Business and Marketing Education, Grades 5-12, BIS 499C	
Assessment (point value)	Description
Content Knowledge (all points)	The candidate will be exposed to adult learning theories, teaching strategies, assessments, and transfer of learning techniques which will enhance and expand his/her repertoire of knowledge and learning and teaching strategies in the Business Education or Marketing Education classroom.