

1 SP-21-Intermediate C++-1

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3 COURSE SYLLABUS

4 COURSE NUMBER: CT144

5 CLASS MEETING DATES: COURSE TITLE: Intermediate C++

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- 7 TEXTBOOK:
- 8 • MindTap Computing for Malik’s C++ Programming: From Problem Analysis to Program Design (7th Edition)
  - 9 • ISBN-10: 1-337-10268-7
  - 10 • ISBN-13: 978-1-337-10268-1
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13 COURSE DESCRIPTION:

14 Further application of C++ programming techniques including file access, abstract data structures, class inheritance, and other advanced techniques. The visual studio Integrated Development Environment is used as the primary development tool.

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- 18 COURSE OBJECTIVES:
- 19 Upon successful course completion, students will be able to:
- 20 • Intermediate and advanced C++ programming topics, emphasizing language features that support object-oriented design & implementation.
  - 21 • Typical topics include dynamic memory usage, classes, inheritance, exception handling, templates, and other programming topics.
  - 22 • Object oriented frameworks are considered and used as examples of advanced C++
  - 23 • Develop well documented programs containing complex data structures.
  - 24 • Incorporate complex input/output file handling techniques.
  - 25 • Create classes and objects in programs.
  - 26 • Incorporate advanced C++ techniques.
  - 27 • Explain the purpose and use of library functions
  - 28 • Explain the purpose and use of user functions
  - 29 • Explain C++ versus C style input/output
  - 30 • Create a user library and executable module using it
  - 31 • Prepare students to attempt the MTA Exam 98-361: Software Development Fundamentals certification exam
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36 COURSE METHODOLOGY:

37 This course involves a combination of teaching methods, including instructor lectures mainly based on textbook chapters, classroom discussions, case studies, reviews, quizzes, reading and homework assignments, exam practice tests, preparation tips, and strategy. Students are expected to come to class prepared by timely completing all assigned readings and homework assignments, and participating in discussions, and other activities such as documentary viewing.

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- 43 LIBRARY RESOURCES:
- 44 Learners are encouraged to use the library resources to assist them in the completion of their assignments and group projects. Alternatively, you can access some of the library resources online
- 45 • <https://bfit.idm.oclc.org/login?url=http://find.galegroup.com/menu/commonmenu.do?userGroupName=m1n1bfrankbos> (Links to an external site.)
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Week	TOPICS	Readings*	Assignments
Week 1	I/O Streams and Data Files	Ch.9	Exercises and Labs
Week 2	Introduction to Classes	Ch.10	ibid. <ibedem>
Week #3	Adding Functionality to Your Classes	Ch.11	“”
Week #4	Extending Your Classes	Ch.12	“”
Week #5	Test #1 Lecture – Pointers	Ch.13	“”
Week #6	The string Class and Exception Handling	Ch.14	“”
Week #7	Strings as Character Arrays	Ch.15	“”
Week #8	Test #2 Lecture – Data Structures	Ch.16	“”
Week #9	The Standard Template Library	Ch.17	“”
Week #10	Inheritance Concepts	Ch.18	“”
Week #11	MTA Exam 98-361 Practice – Session I *		“”
Week #12	MTA Exam 98-361 Practice – Session II		“”
Week #13	Review for MTA Exam 98-361 & final exam		“”
Week #14	Final Exam		“”

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- 50 PRINCIPALS OF COURSEWORK
- 51 • Students are expected to deliver the following work by the due date required by the instructor.
  - 52 • Students are expected to spend 120 hours of their own time completing reading and practice tests, homework assignments as well as reviewing class notes.
  - 53 • Keep up with the work and submit your assignments on time! Playing catch-up in this course is inappropriate. The topics covered in this course build on themselves. Consequently, you cannot be working on assignments past due by several weeks and expect to be a valued participant in this course and finish on time
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60 EVALUATION METHODS:

Student performance will be assessed in accordance with the following criteria:	
10%	Professionalism, Class Participation, and Discussions
20%	Labs
30%	Class Assignments (reading, homework, exercises)
20%	Tests
20%	Final Exam
100%	TOTAL

61 GRADING SCALE:

A (95-100)	Excellent to Very Good; comprehensive knowledge and understanding of subject matter, marked perception and/or originality
A- (90-94)	
B+ (87-89)	Good; moderately broad knowledge and understanding of subject matter; noticeable perception and/or originality.
B (84-86)	
B- (80-83)	Satisfactory; reasonable knowledge and understanding of subject matter; some perception and/or originality.
C+ (77-79)	
C (74-76)	Marginal; minimum of knowledge and understanding of subject matter; limited perception and/or originality.
C- (70-73)	
D+ (67-69)	Failing; unacceptable low level of knowledge and understanding of subject matter; severely limited perception and/or originality; absences in excess of allowable limit.
D (60-66)	
F (< 60)	

62 ACADEMIC HONESTY:

63 Academic dishonesty is a serious issue. Honesty in all academic work is expected of every student at all times. This means each individual does his or her own work without

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assistance from other sources on any assignment or exam unless otherwise directed by the instructor. You are unable to learn what you need to know if you do not do your own work. All students should watch the Academic Honesty tutorial, <https://www.youtube.com/watch?v=73-327hp0VY&feature=youtu.be> (Links to an external site.)

A violation of academic honesty can include but not be limited to:

- Plagiarism
- Falsifying documents
- Submitting the same assignment in multiple classes
- Copying or sharing work from another student
- Aiding and abetting cheating
- Using any form of technology, i.e. cell phones, laptops, student S: drive, etc, as a tool for academic dishonesty.

It is the responsibility of each student to understand BFIT’s expectations for academic honesty and to seek help in understanding the policy if necessary.

BFIT instructors are obligated to investigate concerns regarding plagiarism when: A student’s in-class work differs significantly from his/her outside work. For example, an investigation may occur when one paper is noticeably different in fluency, style or syntax from others by the student, and/or, a paper obviously uses sources which are not cited or which are improperly acknowledged, and/or, work (papers, labs, exams) is submitted at a level of understanding and insight beyond that which a student has typically exhibited in his/her work.

All assignments must be written in your own words. The authors of the sources used must be given credit in the form of in-text citations and references.

For the complete policy on Academic Honesty, please see the BFIT Student Handbook.

#### ATTENDANCE:

Attendance and Class Participation are two of the most important aspects of this course because they directly affect your Professionalism, Class Participation, and Discussions grade, and your overall academic performance. Students are expected to be present and on time for all scheduled classes and activities. Refer to your Student Handbook for the most current school’s Attendance Policy.

#### MAKEUP POLICY:

Students are required to give the instructor advance notification of any planned absence. Failure to do so may result in loss of opportunity to make up the work missed. There are no excused or unexcused absences. However, only those students who provide acceptable documentation of extenuating circumstances related to the absences will be allowed to make up missed work. Circumstances that qualify as “extenuating” include jury duty, military leave, death of an immediate family member, or medical emergency. In case(s) you are allowed to make up the missed work, then it is your responsibility to complete and submit the subject work by the next class meeting of your return to school.

#### EXAMINATION POLICY:

Refer to the above “Evaluation Methods” and “Course Outline” sections for means of assessment and exam schedules.

#### ACCOMODATIONS STATEMENT:

If you feel that you may need additional support or an accommodation because of a disability or a learning challenge, please contact me (the instructor) or Sally Heckel, the Learning Specialist, to discuss your specific needs. The Learning Specialist, in Room U115 inside the Academic Success Center, will work with you and the teacher to coordinate reasonable accommodations or additional support. BFIT and I are committed to helping you succeed. Please feel free to discuss any aspect of this course with the teacher.

**This course syllabus may be subject to change.**