CSC 24400 – Computer Science II
Course Information / Syllabus

Semester:	Spring 2018			**Credit Hours:**	4
Class Times:	TR: 2:30 – 4:15 p.m.			**Class Room:**	Y 307

Instructor:	Dr. Lawrence Miller	**Office**	Y 315A	**Office Hours:**	MWF	9:00 – 10:40 a.m.
					TR	9:00 – 10:50 a.m.
					M	3:00 – 4:00 p.m.
					(Or by appointment)	
				Lab Help Hours:	W	4:00 – 5:00 p.m. (in Y 307)

Phone:	636-627-2504	**E-mail:**	lmiller@lindenwood.edu	

Course Description:

CSC 10022 Introduction to Computer Science (3)
This course is a continuation of CSC 14400 using the C++ programming language. Topics include the basic C++ syntax for input/output, assignment statements, conditional statements iterative statements and functions. It will continue with single and multidimensional array processing, character manipulation, elementary searching and sorting techniques, structures, classes, and pointers. Prerequisite: CSC 14400 with a grade of C or better.

CSC / CIS Program Learning Objectives:

This course provides students with basic knowledge and background supporting the following CSC/CIS Program Learning Objective Components:

PLO 1a.1: Graduates are able to read programs in multiple languages (as well as pseudocode), and understand what the program is doing.

PLO 1a.2: Graduates demonstrate ability to design and implement correctly functioning programs in two or more languages.

PLO 1b.3: Graduates are able to develop high quality documentation as part of: 1) a formal approach to software development, 2) the software development lifecycle, and 3) a post-development analysis.

PLO 1c.1: Graduates are able to construct algorithms for solving specific problems.

PLO 2a.1: Graduates are able to use contemporary operating systems and their associated tools

Course Objectives:

This course will continue to develop student programming skills using C++. After completing this class, you should be able to:

1. Develop problem solving skills related to computer programming and the C++ programming language in order to develop programs using advanced techniques.
2. Furnish the student the techniques, procedures, and skills necessary to write correct and efficient programming solutions to selected problems using the C++ programming language.
3. Specifically, students who complete this course will be able to:
    a. Write/trace program code that employs single dimensional arrays.
    b. Write/trace program code that employs multidimensional arrays.
    c. Write/trace program code to manipulate character and character string data .
    d. Write/trace program code that employs structures.
    e. Write/trace program code that employs classes and objects.
    f. Write/trace program code that employs multiple source code files, header files and object code files.
    g. Write/trace program code that employs the more advanced concepts in C++ such as data abstraction, polymorphism, overloading, templates, and information hiding.
    h. Write/trace program code that employs elementary dynamic structures
4. Prepare the student to discuss and evaluate the need for various data structure techniques to solve programming problems.
5. Establish a foundation upon which further study of computer science and object-oriented programming related topics can be based.

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Course Prerequisites:	CSC 14400 with a grade of C or better.
Textbook:	Tony Gaddis, "Starting Out With C++: From Control Structures to Objects, 9e," Addison Wesley, 2018. ISBN: 9780134498379.
Canvas:	Most course materials, including lecture notes and project assignments, will be posted on the course page in Canvas.
Lindenwood University Expectation of Student Work:	Student work is defined as assignments, homework, labs, projects, and other academic activities to be completed outside of instructional time, including reading, studying, writing, research etc. Students should expect to spend a <u>minimum</u> of two hours per week completing this work for each credit hour enrolled (thus 6 hours of work outside of class, each week, for a 3-hour course), although the time spent outside of class may increase based on the topic and level of the course.
Time Expectations for this Course:	This course is a **<u>very</u>** time intensive course. If you wish to pass this course, you should plan on a minimum of 10-15 hours each week studying/preparing for this course. If you wish to truly succeed in this course, you should plan on spending a minimum of 19-32 hours each week studying/preparing for this course. Some weeks will likely require even more time. Most of this time will likely be spent on reading and understanding program code, performing code tracing/walkthroughs, writing program code, and testing/debugging program code.

For this course, the tentative schedule below (at the end of the syllabus) identifies the work to be done for this course. The time estimates required to pass this class are as follows:
- each chapter/section reading is expected to take 2-3 hours.
- each programming project is expected to take students between 2 and 25 hours to complete. Students who have mastered all prior covered material will likely complete the required work closer to the 2 hour estimate, while students who are struggling with material will tend towards the 25 hour estimate. As the semester progresses, complete mastery of all prior material helps to offset the increasing depth of material found in project assignments. For the typical student, a programming project entails about 10-15 hours of work per exercise.
- each exam is designed to require approximately 5-10 hours of studying in order to earn a passing grade.

Communication:	The best way to contact me is by e-mail. I have access to e-mail on my cell phone and will respond as soon as is reasonably possible. Announcements will be posted on Canvas. Check your LionMail frequently (at least once per day).
Grading Formula:	

Midterm Exams (3)	30%
Final Exam	30%
Programming Projects (7 ± 2)	40%

Notes: Although class participation is not explicitly part of your grade, it will be taken into account in borderline cases (ex. 89.5). So, make sure to participate in class!

Grading Scale:	Grading will be done on a straight scale as follows:

89.5-100	A	59.5-69.5	D
79.5-89.5	B	0-59	F
69.5-79.5	C		

If your final grade is within 0.5 points from the next higher letter grade, then I will bump your grade to the next letter grade, provided that:
1. You have participated appropriately in class
2. You have completed and submitted all programming projects on time.

Grading Questions:	I will address all questions about grading if they are brought to my attention in a timely manner. Please see me within one week of the return date of the exam or project in question.

Note: I will **not** send grade information through e-mail, so please don't ask. If you want to see your grades, you need to look on canvas or see me in person during office hours.

Attendance: Students are expected to attend every class meeting of courses in which they are registered. Almost invariably, students who attend every class during the semester outperform those who miss significant numbers of classes. Only in specific, unavoidable situations does the University excuse absences from class. These situations include: illness, death in the family, religious observances, participation in University sponsored activities, government required activities, and any other absence which the instructor approves. Whether an absence is "excused" or not is determined by the instructor.

An unexcused absence from class will result in forfeiture of a grade for any applicable quizzes, exams, or in-class assignments. If you know of any upcoming excused absence on an in-class assignment, quiz, or exam, you must make arrangements with me to complete the in-class assignment, quiz, or exam *before* the pending absence, or no credit will be given. If you must miss a class, please notify the instructor as soon as possible (ASAP) via e-mail and verbal notification (if possible). You should make every attempt to notify the instructor at least 24 hours in advance, when possible. Otherwise, you should notify the instructor as soon as possible when you miss a class.

> **Attendance will be taken at the beginning of each class. You will be allowed 4 unexcused absences without any penalties. For each additional unexcused absence, your final grade will be reduced by 2%. Thus, for example, if your final grade is an 85 out of 100% (which is a B), and you have missed 7 classes without a valid excuse, then your final grade will be adjusted down to a 79 out of 100% (which is a C).**

If you miss a class, whether excused or not, you are still responsible for all the material covered during class, as well as any assignments that were due that class or which will be due in subsequent classes, as well as any exams that were given, or which will be given in subsequent classes. Absence from class, whether excused or unexcused, does not entitle you to extensions on assignments, quizzes, or exams. Accommodations / Adjustments for graded items or evaluations will only be considered / allowed if the absence is excused.

Student Athletics: If you are involved in university sponsored student athletics events that will require you to miss classes (considered an excused absence with appropriate documentation), you should notify the instructor in writing ASAP as to which classes you will miss due to athletic events.

Exams: There will be three (3) midterm exams and a Final Exam.

Exams will be closed book and closed notes, unless otherwise stated. All exams are **comprehensive** in nature. This is because much of the material taught at the end of the semester depends heavily on the material taught at the beginning. However, each exam will focus more on the material covered since the last exam. This does not mean that there will be no questions focused on "old" material. The final exam is **comprehensive** and will cover all the material covered throughout the semester.

No makeup exams will be given for an unexcused absence. A student missing an exam or quiz due to an excused absence may, <u>at the instructor's discretion</u>, 1) have the grading weights adjusted, placing more weight in other categories, or 2) be scheduled to take a makeup exam or quiz. Remember, whether an absence is "excused" or not is determined by the instructor. Documentation of a valid excuse is required.

In general, I prefer not to give makeup exams. If you miss an exam or quiz due to an emergency, you must contact me (you need to speak with me in person, or get an email reply) within 24 hours of missing the quiz or exam to reschedule. If you do not contact me within 24 hours, you will not have the opportunity to make up the exam. This policy does not apply to the final exam. Attendance at the final exam is mandatory. If you miss the final exam, you will need to contact the instructor immediately. Only if the absence is excused, will a makeup final exam be scheduled. Only in extreme circumstances will a makeup final exam be scheduled. Only if the instructor determines that the circumstances are extremely unusual will you be allowed to makeup the final exam.

Programming Projects / Term Project: Programming projects are due on the date and time specified. Late projects **will be accepted**. However, 25% will be deducted from your grade for each day it is late. It is in your best interest to turn in your projects on time. Instructions for submitting your project will be given in class. All programming

assignments are to be individual efforts, unless the instructor says otherwise. Programs submitted are expected to run to completion. No more than 20% credit will be given for programs that do not execute to completion. All programs must compile and run. A program that does not compile, or which does not run at all, will receive a 0 grade.

The instructor reserves the right to change the number/quantity of Programming Projects in order to meet the objectives of the course. The instructor reserves the right to change the due dates of any of the Programming Projects, if given, to meet the objectives of the course.

Students with Disabilities:
If you have a disability or believe you may have a disability that requires reasonable accommodations for participation in this course, you need to contact Jeremey Keye, Student Support and Accessibility Coordinator, at 636-949-4510 or jkeye@lindenwood.edu and notify your professor during the first week of class so that accommodations can be made. Reasonable accommodations will be made to ensure that students with disabilities have a fair opportunity to perform at their potential. Students are responsible for providing the instructor with a Campus Accessibility Faculty Notification Form specifying classroom accommodations. Your academic advisor can also help with this process.

Copyright Policy:
It is the intent of Lindenwood University that all members of the University community comply with the provisions of the United States Copyright Law. This Copyright policy serves to uphold the University's commitment to protecting the principles of intellectual property, as well as, protect the rights of its faculty to make appropriate use of copyrighted works for acceptable educational purposes.

This policy applies to all University faculty, staff, and students who wish to make use of copyrighted works, whether in print, electronic, or other form. Implicit in this policy is the "Fair Use Act" which applies across the board to uses in the traditional classroom environment and the TEACH Act which is an exception to the "Fair Use Act" for distance learning.

Students may not distribute copies of copyrighted materials to other students. This includes such things as PowerPoints, handouts, podcasts, etc.

Recording and Electronic Devices:
During classroom instruction and testing, the use of cameras, video, audio taping devices, or any other kinds of electronic devices (including telephones, cell phones, calculators, tablets, Google glasses, and Bluetooth devices) is allowed only after obtaining permission from the instructor; otherwise, the use of such devices is prohibited.

Electronic devices used for prosthetic or accessibility purposes may only be used after the faculty member has received a signed accommodation letter from the Accessibility Officer. Any recordings made may not be redistributed to anyone not a member of the class without the express written permission of the instructor and all student subjects of the recording.

Instructors Policies:
Students wishing to withdraw from this course with a grade of "W", may do so up to the deadline of *Friday, March 23, 2018* (this is a student initiated action and must be done by the student through the Records Office).

All students not withdrawing by *Friday, March 23, 2018* are assumed to be enrolled in this class through to completion. If a student is failing or wishes to drop for another reason it is the student's responsibility to do so by the deadline. **After this date**, no Drops or Incompletes will be given simply to avoid a failing grade in the course; although Drops or Incompletes may be given for other valid reasons. Medical Drops, which can be completed throughout the semester, are given through a certification by the University.

The final exam will be held at the officially scheduled time and date. The final exam is scheduled as **Tuesday, May 1, 2018, 2:00 – 4:00 p.m.**

Please check the official final exam schedule to verify these dates time. Be sure to make any end of semester travel plans accordingly, as these dates/times **cannot and will not be changed**!

You will be responsible for all material covered, unless otherwise explicitly stated, whether or not it is covered in the required text.

Cell phones, laptops, calculators, and other electronic devices are not permitted to be used in the classroom during class, unless it is being used to take notes, or solve problems assigned by the instructor. No texting is allowed in class. No videotaping is allowed in class. No watching of videos, youtube, etc., is allowed in class.

Academic Integrity:

Lindenwood University students belong to an educational community invested in the exploration and advancement of knowledge. Academic integrity is a critical part of that investment: all students have a fair opportunity to succeed, and as such, all students owe their classmates, instructors, administrators, and themselves the duty of scholarly and creative work untainted by plagiarism, dishonesty, cheating, or other infringements of academic integrity. In turn, instructors, staff, and administrators will also uphold these policies in order to promote student intellectual development and preserve the integrity of a Lindenwood degree.

As part of this educational community, students are expected to familiarize themselves with the university's policies on Academic Honesty in the Lindenwood University Student Handbook and to adhere to these policies at all times. Students are also encouraged to consult the resources of the university library and the Writing Center/Academic Success Center for assistance in upholding the university honesty policy.

Academic Dishonesty includes plagiarism, cheating, and lying or deception.
- Cheating is giving or receiving unauthorized aid on an examination, assignment, or other graded work. Regardless of where the aid comes from—e.g., cell phone, crib sheet, or another student—it qualifies as academic dishonesty.
- Lying/Deception refers to dishonest words, actions, or omissions directed at University personnel by a student in order to improve the academic or financial standing of any student at the University.
- Plagiarism is the fraudulent presentation of another person's ideas or work as the student's own, or the presentation of the student's own previous work as new and original.
  - When a student, whether by accident or design, does not properly acknowledge sources in any academic assignment where original work is expected, that student is stealing the ideas and effort of another.
  - **Authorship Verification**: For all assignments completed entirely or in part out of class, the instructor reserves the right to interview the student about the work to verify authorship. A student who is unable to demonstrate a basic understanding of the submitted work will be reported for academic dishonesty and an appropriate penalty will be applied.

Consequences of Academic Dishonesty

The penalty for the first reported offense of academic dishonesty will be determined by the instructor and may result in a reduced or failing grade on the work/test, failure in the course, or other appropriate penalty. Upon a first report of dishonesty, the student is also required to complete an online Academic Integrity Tutorial. A charge for the tutorial will be applied to the student's Business Office account. For undergraduate students, a second offense will result in failure of the class, and a third offense will lead to expulsion from the university. Graduate students will be expelled after a second offense is reported.

Any questions concerning this policy should be directed to the Associate Provost, who maintains confidential records of academic dishonesty reports. These records are accessible only to the Provost and Associate Provost and are not linked to the student's academic or financial records at the University.

Academic Dishonesty (in this course):

Academic Dishonesty in this Course:
In this course, Academic Dishonesty includes, but is not limited to:

- Improper access to evaluation material or records.
- Submission of material which is not the student's own work.
- Conduct which interferes with the work or evaluation of other students.
- Copying from another person, book, magazine, or other electronic or printed media, including the Internet.
- Obtaining another person's exam answer or answers.
- Assisting another student in submitting work that is not the student's own.
- Any activity that falls under the University definition.

Copying from a book, the Internet, or a periodical is considered unoriginal work and will be treated as cheating (unless prior permission has been given by **both** the instructor and the author).

It is unacceptable to share program code. It is unacceptable to share homework solutions. It is ok to talk about program algorithms and homework solution strategies, but it is not acceptable to use the same code or code segments, or to share actual solutions to homework problems.

Penalties for Academic Dishonesty, including Cheating, Plagiarism, or Lying/Deception:
The following procedure will be followed:
- The penalty for a first offense will be determined by the instructor and may include failure of the assignment/exam, or failure in the course. Evidence of cheating or plagiarism will be brought to the Provost, who will maintain a confidential file as a record of the incident.
- The penalty for a second offense will be failure for the course and Academic Probation. In the event of a second offense, the instructor will notify both the student and his/her advisor, in writing, that the student has received a second warning for cheating or plagiarism. The student will be required to meet with the Provost and/or the Dean.
- The penalty for a third offense will be failure for the course and Academic Suspension. The student will not be permitted to enroll in further courses at Lindenwood University until/unless the suspension is lifted.

In order to be fair, penalties will be applied to all parties involved regardless of culpability or fault.

Cheating is planned – it is never unintentional. Therefore, the penalty assessed in instances of cheating will be severe, and may include failure in the course.

This policy holds for homework assignments, labs, programs, and projects, as well as for quizzes and tests/exams. This policy applies across all courses at Lindenwood University, so that even though an offense may be the first offense in this course, it may well be the second or third offense at the University resulting in an appropriate penalty for a second or third offense.

Important Dates:

First Day of Classes	Monday, January 8, 2018
Last Day to Add Classes	Friday, January 12, 2018
Midterm Grades	Tuesday, February 27, 2018
Spring Break	Monday, March 12 – Friday, March 16, 2018
Last date to withdraw with a "W"	Friday, March 23, 2018
Good Friday (No Classes)	Friday, March 30, 2018
Last Day of Classes	Friday, April 27, 2018
Final Exams	Tuesday May 1, 2018 - Section 21: 11:00 a.m. – 1:00 p.m.
Final Grades	Tuesday, May 8, 2018

Change of Syllabus:

This Course Information / Course Syllabus is subject to change, at any time, if the instructor deems it necessary in order to accomplish the course objectives. Students will be notified in writing of all substantive changes to the course syllabus. It is the student's responsibility to keep abreast of such changes. I will also notify students via canvas and e-mail if the syllabus changes. It is the student's responsibility to keep abreast of such changes.

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NORMAL CLASS MEETING TIME	SCHEDULED EXAMINATION TIME	
MWF 8:00-8:50	Friday, May 4	8:30-10:30 am
MWF 9:00-9:50	Monday, April 30	8:30-10:30 am
MWF 10:00-10:50	Wednesday, May 2	8:30-10:30 am
MWF 11:00-11:50	Monday, April 30	11:00 am-1:00 pm
MWF 12:00-12:50	Wednesday, May 2	11:00 am-1:00 pm
MWF 1:00-1:50	Friday, May 4	11:00 am-1:00 pm
MWF 2:00-2:50	Monday, April 30	2:00-4:00 pm
MWF 3:00-3:50	Wednesday, May 2	2:00-4:00 pm
MWF 4:00-4:50	Friday, May 4	2:00-4:00 pm
TR 8:00-9:15	Thursday, May 3	8:30-10:30 am
TR 9:30-10:45	Tuesday, May 1	8:30-10:30 am
TR 11:00-12:15	Tuesday, May 1	11:00 am-1:00 pm
TR 1:00-2:15	Thursday, May 3	11:00 am-1:00 pm
TR 2:30-3:45	Tuesday, May 1	2:00-4:00 pm
TR 4:00-5:15	Thursday, May 3	2:00-4:00 pm
M Evening	Monday, April 30	Regular Meeting Time
T Evening	Tuesday, May 1	Regular Meeting Time
W Evening	Wednesday, May 2	Regular Meeting Time
R Evening	Thursday, May 3	Regular Meeting Time

Remember, the final exam will be held at the officially scheduled time and date. The final exam is scheduled as follows:

Tuesday, May 1, 2018, 2:00 – 4:00 p.m.

Please check the official final exam schedule to verify this time. Be sure to make any end of semester travel plans accordingly, as this date/time **cannot and will not be changed**!

Tentative Schedule: The tentative schedule for assignments and exams, can be found in the Canvas calendar. Each module in canvas lists the lectures and other materials that need to be completed before the quiz dates. This schedule is tentative and subject to change as necessary in order to meet the objectives and needs of the course.