COURSE SYLLABUS

Programming Logic and Design
ITSE 1429 93402
Spring 2016

ARTS, BUSINESS, SPORTS SCIENCE, AND TECHNOLOGY DIVISION
BUSINESS and TECHNOLOGY LABORATORIES
Office Hours: 8:00 a.m. - 6:00 p.m. Mon-Thu,
8:00 a.m. - 4:30 p.m. Fri
Location: T135, Telephone: 972-273-3450

This course syllabus is intended as a set of guidelines for (ITSE 1429). Both North Lake College and your instructor reserve the right to make modifications in content, schedule, and requirements as necessary to promote the best education possible within prevailing conditions affecting this course.

Instructor Information:

Professor: George Driscoll
E-mail: gdriscoli@dccc.d.edu
Office phone: 972-273-3414
Office: T128
Office hours: by appointment

Course Information
Course title: Programming Logic and Design
Course number: ITSE 1429
Section number: 93402
Credit hours: 4
Lecture meeting time: Internet
Lab meeting time: Internet

Course description: Introduction to programming and its fundamental concepts. Topics include but not limited to creating flow charts and other problem solving tools, linked lists, binary trees, and relational databases.
Course prerequisites: None
Required Textbook and Materials
- E-mail account
- 1 GB USB Flash Drive

Recommended Textbook (NOT Required)

Semester Specifics:

Last day to withdraw from this class is: Thursday, April 14, 2016

Course Objectives
Upon completion of the course, students should be able to:

1. Discuss the ways computers and programming languages are used for personal, workgroup, and enterprise computing.
2. Identify basic concepts and define terminology associated with computer systems and program development.
3. Apply problem-solving methodology to practical situations through the use of computers.
4. Utilize tools and apply problem-solving skills to implement software design.
5. Write simple programs.

Specific Course Learning Outcomes

- Understand the General Problem Solving Concepts and Steps
- Study Procedural Programming Structure
- Study Object Oriented Programming Concepts
- Understand and apply Sequential Logic Structure
- Use Decisions for problem solving
- Use Loops and Case Logic Structures
- Understand and use Arrays in solving problems
- Understand and apply Files and Databases concepts
- Explain and apply the basic techniques of Procedural and Object Oriented Programming
- Design and develop correct executable projects
- Create appropriate documentation
- Understand and list various applications software

Course Outline: Reading/Lecture Class Schedule:

<table>
<thead>
<tr>
<th>Week</th>
<th>ASSIGNMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chapter 1, Introduction to Computers and Programming</td>
</tr>
<tr>
<td>2</td>
<td>Chapter 2, Input, Processing, and Output</td>
</tr>
<tr>
<td>3</td>
<td>Chapter 3, Modules</td>
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<tr>
<td>4</td>
<td>Chapter 4, Decision Structures and Boolean Logic</td>
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<tr>
<td>5</td>
<td>Chapter 5, Repetition Structures</td>
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</tbody>
</table>
Means of Assessment of Course Learning Outcomes
Assignments, Quizzes, Tests and Programming Projects will be used to assess Course Learning Outcomes.

Evaluation Procedures

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz Average</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>Lab Assignment Average</td>
<td>11</td>
<td>25%</td>
</tr>
<tr>
<td>Test Average</td>
<td>2</td>
<td>30%</td>
</tr>
<tr>
<td>Programming Project Average</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

Grading Scale

If you earn:

90% - 100%, you will receive an A.
80% - 89%, you will receive a B.
70% - 79%, you will receive a C.
60% - 69%, you will receive a D.
Below 60 %, you will receive a failing grade of F.

Discipline/ Course/ Department/Policies
All Assignments and/or Programming Projects are due prior to the end of the day as listed in the course (i.e. prior to 11:59 p.m.). Please, check the course for details.
Assignments and Programming Projects submitted after the published due date will be accepted and possibly graded at the discretion of the Instructor. There is no guarantee of partial credit for Assignment or Programming Projects submitted after their published due date.
ACADEMIC DISHONESTY
The Student Code of Conduct prohibits academic dishonesty and prescribes penalties for violations. According to this code, which is printed in the college catalog, "academic dishonesty", includes (but is not limited to) cheating, fabrication, facilitating academic dishonesty, plagiarism, and collusion.

1) The Vice-President of Academic & Student Affairs may initiate disciplinary proceedings against a student accused of academic dishonesty.
2) Academic dishonesty includes, but is not limited to, cheating on a test, plagiarism and collusion.
3) Cheating on a test includes:
   a) Copying from another student’s test paper;
   b) Using, during a test, materials not authorized by the person giving the test;
   c) Collaborating with another student during a test without permission to do so;
   d) Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of an un-administered test.
   e) Substituting for another student, or permitting another student to substitute for you to take a test; and
   f) Bribing another person to obtain an unadministered test or information about an unadministered test.
4) “Plagiarism” means the appropriation of another’s work (ideas and/or words) and the unacknowledged incorporation of that work in one’s written work offered for credit. Quotes not identified as quotes constitute a form of plagiarism even if the borrowed ideas are documented.
5) “Collusion” means an unauthorized collaboration with another person in preparing written work offered for credit.

Academic dishonesty may result in the following sanctions, including, but not limited to:
1. A grade of zero or a lowered grade on the assignment or course.
2. A reprimand.
3. Suspension from the college.

NOTIFICATION OF ABSENCE DUE TO RELIGIOUS HOLY DAY(S)
Students who will be absent from class for the observance of a religious holiday must notify the instructor in advance. Please refer to the Student Obligations section of the college catalog for more explanation. You are required to complete any assignments or take any examinations missed as a result of the absence within the time frame specified by your instructor.

REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (A430)
North Lake College provides academic accommodations to students with disabilities, as defined under ADA law. It is the student’s choice and responsibility to initiate any request for accommodations. If you are a student with a disability who requires such ADA accommodations,
please contact North Lake College’s Disability Services Office in person (A430) or by phone at 972-273-3165.  
http://www.northlakecollege.edu/resources/disability.html

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT OF 1974 (FERPA)
In compliance with the Family Educational Rights and Privacy Act of 1974 (FERPA), the College may release information classified as “directory information” to the general public without the written consent of the student. Directory information includes: (1) student name, (2) student address, (3) telephone numbers, (4) date and place of birth, (5) weight and height of members of athletic teams, (6) participation in officially recognized activities and sports, (7) dates of attendance, (8) educational institution most recently attended, and (9) other similar information, including major field of student and degrees and awards received. Students may protect their directory information at any time during the academic year. If no request is filed, directory information is released upon written inquiry. No telephone inquiries are acknowledged. No transcript or academic record is released without written consent from the student, except as specified by law.

ADMINISTRATIVE WITHDRAWAL
Students with valid extenuating circumstances may be eligible for an administrative withdrawal by the Dean of the Division in which the course or courses are taught. An administrative withdrawal will not be awarded to students who simply fail to withdraw prior to the last day to receive a “W.” The request for an administrative withdrawal must be made in writing to the Dean of the Division with any supporting documentation attached. This must occur before the last official day of the semester.

DROP POLICY
If you are unable to complete this course, you must officially withdraw by: April 14, 2016. Withdrawing is a formal procedure which you must initiate; your instructor cannot do it for you. All Dallas County Community Colleges charge a higher tuition rate to students registering the third time for a course. This rule applies to the majority of credit and Continuing Education / Workforce Training courses. Developmental Studies and some other courses are not charged a higher tuition rate. Third attempts include courses taken at any DCCCD college since the fall 2002 semester. For further information, go online to: http://www.DCCCD.edu/thirdcourseattempt.

STOP BEFORE YOU DROP
For students who enrolled in college level courses for the first time in the fall of 2007, Texas Education Code 51.907 limits the number of courses a student may drop. You may drop no more than 6 courses during your entire undergraduate career unless the drop qualifies as an exception. Your campus counseling/advising center will give you more information on the allowable exceptions. Remember that once you have accumulated 6 non-exempt drops, you cannot drop any other courses with a “W”. Therefore, please exercise caution when dropping courses in any Texas public institution of higher learning, including all seven of the Dallas County Community Colleges. For more information, you may access: https://www1.dcccd.edu/coursedrops.

FINANCIAL AID STATEMENT AND CERTIFICATION OF ATTENDANCE
You must attend and participate in your on-campus or online course(s) in order to receive federal financial aid. Your instructor is required by law to validate your attendance in your on-campus or online course in order for you to receive financial aid. You must participate in an
academic related activity pertaining to the course such as but not limited to the following examples:

- initiating contact with your instructor to ask a question about the academic subject studied in the course;
- submitting an academic assignment;
- taking an exam;
- completing an interactive tutorial;
- participating in computer-assisted instruction;
- attending a study group that is assigned by the instructor;
- or participating in an online discussion about academic matters relating to the course.

In an online class, simply logging in is not sufficient by itself to demonstrate academic attendance. You must demonstrate that you are participating in your online class and are engaged in an academically related activity such as in the examples described above. Students who are receiving any form of financial aid should check with the Financial Aid Office prior to withdrawing from classes. Withdrawals may affect your eligibility to receive further aid and could cause you to be in a position of repayment for the current semester. **Students who fail to attend or participate are also subject to this policy.**

To apply for financial aid in the DCCCD, students must complete FAFSA (Free Application for Federal Student Aid) on the web at: [http://www.fafsa.ed.gov](http://www.fafsa.ed.gov)

**COUNSELING SERVICES (A311)**
Counseling services for personal issues are provided to all students currently enrolled at North Lake College at NO CHARGE. These services are provided by licensed professionals who are bound by confidentiality (within ethical parameters). With the assistance of a counselor, students are able to identify, understand, resolve issues and develop appropriate skills. To make an appointment call 972-273-3333 or visit A311.

For additional information, go to: [http://northlakecollege.edu/services-and-resources/health-and-wellness/counseling-services/Pages/default.aspx](http://northlakecollege.edu/services-and-resources/health-and-wellness/counseling-services/Pages/default.aspx)

**THE ACADEMIC SKILLS CENTER (ASC)**
The ASC is designed to provide the following assistance to students:

- An **ESOL lab** with computer access.
- Free tutoring for students enrolled in **Foreign Language** courses.
- The **iRead Lab** offers individual and small group tutoring, as well as workshops, to help current students improve their reading, study, and test taking skills.
- The **Writing Center** to help students clarify writing tasks, understand instructors’ requirements, develop and organize papers, explore revision options, detect grammar and punctuation errors, properly use and document sources, and improve their writing skills.
- The **Online Writing Lab (OWL)** allows students to submit papers to our writing tutors electronically and get feedback within 24-72 hours. The OWL can be accessed through eCampus.
  - After logging on to eCampus, click on the Community Tab at the top.
  - Type “Owl” in the search field and click “Go.”
Next, click on the double drop-down arrows next to “NLC-OWL2,” and then click on “Enroll.”

Once enrolled, students can receive services from the OWL.

- The Blazer Internet Lounge with 12 computers, additional open seating, and WiFi Internet access.

For more information or to schedule a tutoring appointment, come by A-332 or call 972-273-3089.

**TESTING CENTER (A 425)**

Monday-Thursday: 8:30 a.m. – 8:00 p.m.

No tests will be issued after 7:00 p.m. Other cut-off times may be in effect for specific exams by the instructor’s direction. All exams collected at 8:00 p.m.

Friday-Saturday: 8:30 a.m.-3:30 p.m.

No tests will be issued after 2:30 p.m. Other cut-off times may be in effect for specific exams by the instructor’s direction. All exams collected at 3:30 p.m.

Sunday – CLOSED

If you instructor requires you to complete an exam in the Testing Center, be sure to have the following information when you request you test:

1. Instructor’s name
2. Subject, course number, and section number (exp: Speech 1311.7011)
3. Exam number (1\textsuperscript{st}, 2\textsuperscript{nd}, 3\textsuperscript{rd}, etc.)
4. Exam deadline (Get this information from your instructor. The testing staff cannot look up this information on computers).

You should also bring the following supplies:

1. Pencil
2. Scantron answer sheet
3. A Test Request Form must be completed before entering the Testing Center.
5. Government or school issued photo identification is required & enforced.

You may not bring personal items into the Testing Center. This includes bags, cell phones, and pagers.

Please show courteous and cooperative behavior while using the services provided by the Testing Center.

DO NOT bring children to the Testing Center. You must make arrangements for the care of your children prior to your exam date. The police department will be notified of any unattended children.

DO NOT take any testing materials with you when you leave the Testing Center. This includes the test, answers, charts, scratch paper. These items will be attached to your test.

Questions? Please visit the Testing Center (A 425) or call 972-273-3160.

**Online Component**
As this is a class with an online component, there are required online study materials and activities that are available on eCampus for the entire semester and accessible almost 24/7. Therefore, access to a computer with Internet access and updated software (available free from Adobe.com) are required. If a student does not have a home computer or Internet, such options as the Student Resource Center located in the North Lake Library or at a local public library are available. Students may also search for other locations with such services.

Specific Learning Activities

See Appendix A

PERFORMANCE OBJECTIVES

SCANS Competencies

The Secretary’s Commission of Achieving Necessary Skills (SCANS), established in 1990, defined a common core of skills that constitute job readiness.

<table>
<thead>
<tr>
<th>Resources</th>
<th>C1, C2, C3.C4.</th>
<th>Allocates Time, Allocates Money, Allocates Materials and Facility Resources, Allocates Human Resources</th>
</tr>
</thead>
</table>

SCANS FOUNDATION SKILLS

<table>
<thead>
<tr>
<th>Basic Skills</th>
<th>F1,F2,F3, F4,F5.F6.</th>
<th>Reading, Writing, Arithmetic, Mathematics, Listening, Speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Qualities</td>
<td>F13,F14,F15,F16,F17.</td>
<td>Responsibility, Self-Esteem, Social, Self-Management, Integrity/Honesty</td>
</tr>
</tbody>
</table>

WORKPLACE SKILLS

1. Work ethics.
2. Implement responsibilities of job position including exhibition of dependability, demonstrating high confidentiality, and meeting of organizationally defined expectations.
3. Operate within scope of authority adhering to company rules, regulations, and policies as established including interpretation of employer/employee handbook and procedures.
5. Practice time management and follow work schedule.
6. Assume responsibility for own decisions and actions.
7. Exhibit pride and positive attitude.
8. Display initiative and enthusiasm in undertaking new tasks.
9. Show assertiveness appropriate to the situation.
10. Seek work challenges.
11. Understand and apply ethical principles to decision-making.
12. Understand the importance of providing good customer service (internal and external).
13. Exhibit ability to handle stress.
14. Participate in meetings in a positive and constructive manner.
15. Maintain state-of-the-art skills through participation in in-service or other training.
17. Interpersonal relationships.
18. Respect individual diversity.
19. Respond to praise or criticism.
20. Provide constructive criticism or praise.
21. Channel and control emotional reactions.
22. Resolve conflicts.
23. Display a positive attitude.
Learning Activities, Outcomes, and Assessment

<table>
<thead>
<tr>
<th>Learning Activity</th>
<th>Learning Outcomes</th>
<th>Assessment</th>
<th>SCANS &amp; Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a brief description of the learning activity.</td>
<td>Briefly list the specific learning outcomes/objectives for the activity.</td>
<td>How will the activity be assessed?</td>
<td>Which SCAN’s and Competencies addressed by the learning activity?</td>
</tr>
<tr>
<td>1. Read assigned textbook material and complete Lab Assignments.</td>
<td>List the General Problem Solving Concepts and Steps.</td>
<td>Lab Assignment Grading Rubric.</td>
<td>(SCANS C1, C3, C7,</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>C11, C12, C13, C14,</td>
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<td>C15, C16, C17, C18,</td>
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<td>C19, C20, F1, F5, F7,</td>
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<td>F8, F9, 10, F12,</td>
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<td>WORKPLACE SKILLS C2, C6,</td>
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<td>C8, C9, C12, C13, C15,</td>
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<td>C24, C25, C26, C27,</td>
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<td>C30, C31, C32, C33)</td>
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<tr>
<td>2. Read assigned textbook material and complete Lab Assignments.</td>
<td>Understand and use concepts and terminology in solving problems.</td>
<td>Quiz and Test Grading Rubric.</td>
<td>(SCANS C1, C3, C7,</td>
</tr>
<tr>
<td></td>
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<td>C11, C12, C13, C14,</td>
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<td>F8, F9, 10, F12,</td>
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<td>WORKPLACE SKILLS C2, C6,</td>
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<td>C24, C25, C26, C27,</td>
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<td>C30, C31, C32, C33)</td>
</tr>
<tr>
<td>3. Read assigned material and complete C++ Programming Projects.</td>
<td>Able to use the Microsoft Visual Studio Integrated Development Environment (IDE) to write simple C++ programs.</td>
<td>Programming Project Grading Rubric.</td>
<td>(SCANS C1, C3, C7,</td>
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<td>C11, C12, C13, C14,</td>
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<td>C24, C25, C26, C27,</td>
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<td>C30, C31, C32, C33)</td>
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</table>
# APPENDIX A

## Specific Learning Activities

<table>
<thead>
<tr>
<th>Learning Activity</th>
<th>Learning Outcomes</th>
<th>Evaluation/Assessment</th>
<th>SCANS and Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab and Terminology Quiz</td>
<td>Understand and list the General Problem Solving Concepts and Steps</td>
<td>Lab-Rubric, grading key</td>
<td>(SCANS C1, C3, C7, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, F1, F5, F7, F8, F9, 10, F12, WORKPLACE SKILLS C2, C6, C8, C9, C12, C13, C15, C24, C25, C26, C27, C30, C31, C32, C33)</td>
</tr>
<tr>
<td>Labs</td>
<td>Study Object Oriented Programming Concepts</td>
<td>Lab-Rubric</td>
<td>(SCANS C1, C3, C7, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, F1, F5, F7, F8, F9, 10, F12, WORKPLACE SKILLS C2, C6, C8, C9, C12, C13, C15, C24, C25, C26, C27, C30, C31, C32, C33)</td>
</tr>
<tr>
<td>Labs and/or project</td>
<td>Understand and apply Sequential Logic Structure</td>
<td>Lab and project rubrics</td>
<td>(SCANS C1, C3, C7, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, F1, F5, F7, F8, F9, 10, F12, WORKPLACE SKILLS C2, C6, C8, C9, C12, C13, C15, C24, C25, C26, C27, C30, C31, C32, C33)</td>
</tr>
<tr>
<td>Lab and/or projects</td>
<td>Use Decisions for problem solving</td>
<td>Lab and project rubrics</td>
<td>(SCANS C1, C3, C7, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, F1, F5, F7, F8, F9, 10, F12, WORKPLACE SKILLS C2, C6, C8, C9, C12, C13, C15, C24, C25, C26, C27, C30, C31, C32, C33)</td>
</tr>
<tr>
<td>Labs and/or Project</td>
<td>Use Loops and Case Logic Structures</td>
<td>Lab and project rubrics</td>
<td>(SCANS C1, C3, C7, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, F1, F5, F7, F8, F9, 10, F12, WORKPLACE SKILLS C2, C6, C8, C9, C12, C13, C15, C24, C25, C26, C27, C30, C31, C32, C33)</td>
</tr>
<tr>
<td>Lab and/or Project</td>
<td>Understand and use Arrays in solving problems</td>
<td>Lab and project rubrics</td>
<td>(SCANS C1, C3, C7, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, F1, F5, F7, F8, F9, 10, F12, WORKPLACE SKILLS C2, C6, C8, C9, C12, C13, C15, C24, C25, C26, C27, C30, C31, C32, C33)</td>
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<tr>
<td>Learning Activity</td>
<td>Learning Outcomes</td>
<td>Evaluation/Assessment</td>
<td>SCANs and Competencies</td>
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<tr>
<td>Labs and/or project</td>
<td>Explain and apply the basic techniques of structured and Object Oriented Programming</td>
<td>Lab and project rubric</td>
<td>(SCANS C1, C3, C7, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, F1, F5, F7, F8, F9, 10, F12, WORKPLACE SKILLS C2, C6, C8, C9, C12, C13, C15, C24, C25, C26, C27, C30, C31, C32, C33)</td>
</tr>
<tr>
<td>Labs</td>
<td>Design and develop correct executable projects</td>
<td>Lab rubric</td>
<td>(SCANS C1, C3, C7, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, F1, F5, F7, F8, F9, 10, F12, WORKPLACE SKILLS C2, C6, C8, C9, C12, C13, C15, C24, C25, C26, C27, C30, C31, C32, C33)</td>
</tr>
<tr>
<td>Lab and/or Project</td>
<td>Create appropriate documentation</td>
<td>Lab and project rubric</td>
<td>(SCANS C1, C3, C7, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, F1, F5, F7, F8, F9, 10, F12, WORKPLACE SKILLS C2, C6, C8, C9, C12, C13, C15, C24, C25, C26, C27, C30, C31, C32, C33)</td>
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