



Department of Computer Science

## CS 4308 Concepts of Programming Languages (CPL)

### Course Syllabus Online

<b>Instructor</b>	<p><b>Dr. Sarah M. North, Instructor</b> Email: <a href="mailto:snorth@kennesaw.edu">snorth@kennesaw.edu</a> <b>Cell: 678-520-6102</b>    Office: 470-578-7774 <b>Office:</b> Kennesaw Campus (Chastain Pointe 206 J) <b>Office hours:</b> MW 9:15 - 10:00am <i>Other hours will be on-line via D2L and/or by appointment only</i></p>
<b>Class Design</b>	<p>This course will be delivered in an <i>online delivery mode</i> with lectures video recording (.mp4) via D2L, laboratory activities, assignments, assessments, and supported resources.</p> <p>An online course can offer opportunities for students to pursue their educational objectives when attending school with a different delivery method (Online) than the traditional in-class method. Specifically, this course will be delivered by online lectures with supporting research project, presentation, and examination. All lecture notes will be installed and available via <b>KSU D2L Brightspace</b> learning management system <a href="http://d2l.kennesaw.edu/">http://d2l.kennesaw.edu/</a>.</p> <p><b>Student-centered learning</b> Variety of online student-centered learning tools will complement individual student learning styles and help students become more versatile learners.</p> <p><b>Collaborative learning</b> Online group work allows students to become more active participants in the learning process. Contributing input requires that students comprehend what is being discussed, organize their thinking coherently, and express that thinking with carefully constructed language.</p>
<b>Textbook &amp; Resources</b>	<p><b><u>Required:</u></b> <b>Concepts of Programming Languages:</b> <a href="#">Concepts of Programming Languages, 10/E</a> by Robert W. Sebesta, University of Colorado, Colorado Springs (2010, Pearson Education Company), ISBN-13: 9780131395312 Link to: <a href="#">Student Companion Website Access</a></p>
<b>Prerequisite</b>	<p>Undergraduate Semester level CS 3304 Data Structure or 3501 Comp Organization, Arch &amp; Comm; Minimum Grade of C <a href="http://ccse.kennesaw.edu/cs/programs/bscs.php">http://ccse.kennesaw.edu/cs/programs/bscs.php</a></p>
<b>Course Description</b>	<p>This course covers the fundamental concepts on which programming languages are based and the execution models supporting them. Topics include values, variables, bindings, type systems, control structures, exceptions, concurrency, and modularity. Languages representing different paradigms are introduced.</p>

<b>Course Learning Outcomes</b>	<p>After successful completion of this course, a student should:</p> <ol style="list-style-type: none"> <li>1. Explain the issues involved in the design and implementation of programming languages</li> <li>2. Conduct critical evaluations of existing and future programming languages</li> <li>3. Select implementation languages for specific applications</li> <li>4. Explain the difference between the different programming language paradigms and discuss the advantages and disadvantages of each one.</li> <li>5. Construct a regular grammar and write code based on a regular grammar to parse input.</li> </ol>
<b>Table of Content</b>	<p><b>Module 1: Preliminaries</b>  Chapter 1: Characteristics of Programming Languages  Reflection and Java Programming  Chapter 3: Syntax and Semantics</p> <p><b>Module 2: Describing Syntax and Semantics</b>  Chapter 3: Syntax and Semantics</p> <p><b>Module 3: Lexical and Syntax Analysis</b>  Chapter 4: – Lexical and Syntax Analysis</p> <p><b>Module 4: Names, Bindings, and Scope; and Data Types</b>  Chapter 5: Names, Bindings, and Scope  Chapter 6: Data Types</p> <p><b>Module 5: Expressions and Assignment Statements &amp; Control Structures</b>  Chapter 7: Expressions and Assignment Statements  Chapter 8: Statement-Level Control Structures</p> <p><b>Module 6: Subprograms and Implementations of Subprograms</b>  Chapter 9: Subprograms  Chapter 10: Implementing Subprograms</p> <p><b>Module 7: Concurrency</b>  Chapter 13: Concurrency</p> <p><b>Module 8: Functional &amp; Logic Programming Languages</b>  Chapter 15: Functional Programming Languages</p>
<p><b>Attendance:</b>  The Instructor expects your attendance on D2L daily, minimum 2-3 time per week. Grade performance is a demonstrated function of attendance, preparation, and participation online. Students in this class should realize the nature of the course in which they are enrolled. This is an online class with no on-campus meetings scheduled. Therefore, there are no planned face-to-face interactions between students or between students and the instructor. Students are encouraged to visit the instructor on campus during office hours but this is not required. Students will interact with each other and with the instructor virtually, through online discussions in D2L, email, chat session, and instructor feedback.</p> <p>It is easy to fall behind in any course, but especially in an online course where it is up to the student to formalize a time to work on course materials. In order to ensure a student does not fall behind it is <b>STRONGLY</b> encouraged that students keep to the schedule suggested in this syllabus [basically one course module per 2 weeks during Fall and Spring semesters and four per week during a 4-week Summer semester].</p>	

There is an activity and assignment due for every module. This is a way to keep the student focused and for the instructor to assess student progress. Students must make a concerted effort to maintain currency and not wait until the last minute to complete assignments. The course is designed to enhance student learning, but the student is ultimately responsible to ensure that the learning takes place.

#### **Evaluation criteria explained:**

- Students are expected to be active participants in each course activities. Full credit for participation will be extended to students who regularly participate in discussion, share ideas, and contribute relevant personal experiences.
- Examinations will consist of essay (short and long answers), multiple choices, T/F questions, technological comprehension that cover in the lecture material, and assigned readings.
- Students will be given specific guidance on the amount of collaboration permitted for each assignment.

#### **Exams:**

There will be 2 primary examinations (cumulative Midterm & Final examination). The content will come from the text and other material presented in lecture sessions as well as the homework assignments. Note that material presented in PowerPoint lectures will supplement the assigned reading. There will be no make-up examinations. It is the student's responsibility to arrange for an excused absence before the exam. A grade of zero will be assigned for all exams missed without an excused absence. If an emergency arises on the day of a midterm, and the instructor deems that the absence is excused, then the weight of the final exam may be increased to replace the midterm. <http://registrar.kennesaw.edu/calendars/>

#### **Discussion:**

There will be eight (8) discussions questions within each module which reflect your weekly online attendances. Students are required to participate in all discussions during the semester via D2L <http://d2l.kennesaw.edu/>

#### **Assignments:**

Assignments are due throughout the term. Each of these assignments is weighted as noted in the assessment section below. You lose 20% of your score if you turn in a homework/presentation/assignment late, and late presentation/project/assignments will only be accepted up to one week after the due date! Late works / assignments / projects are not accepted!

**Note: Any assignments, project, online assessment past the due dates points off (*above restriction*) and/or will not be accepted.**

Assignments are due throughout the term and must be submitted through D2L by 11:59pm on designated due date for each assignment. Each assignment is weighted as noted in the assessment section below.

**You lose 20% of your score if you turn in a homework assignment late, and late assignments** will only be accepted up to one week after the due date!

#### **CPL Assignments**

1	<b>CPL Assignment</b> Each Modules	Each student expected to complete each module assignments. There will be four assignments related to chapter(s) within each modules. <b><i>Please refer to D2L Learning Modules and/or D2L Dropbox.</i></b>
2	<b>CPL Project</b> Individual and/or group CPL Project	<p><b>CPL Project:</b> You can work on this project as individual or as a group of 2-3 students. The project for this term is to implement the Pascal program in three different languages: Java, Ada, and Python. (<i>You can download any free IDE (Compiler) software to use for these programming languages</i>)</p> <p><b>Note:</b> (<i>If you work as a group, please make sure each person submit the project in their own dropbox as long as student's names are listed on the project.</i>)</p>

### Student Course Evaluation:

A standard questionnaire (described below) will be administered during the last two weeks of the semester in all courses. Additional questions developed by the college or instructor(s) may be included as well. It is important that each student provide meaningful feedback to the instructor(s) so that changes can be made in the course to continually improve its effectiveness. We value student feedback about the course, our teaching styles, and course materials, so as to improve our teaching and you're learning. At a minimum, the following two questions will be asked:

1. Identify the aspects of the course that most contributed to your learning (include examples of specific materials, exercises and/or the faculty member's approach to teaching and mentoring), and
2. Identify the aspects of the course; if any that might be improved (include examples of specific materials, exercises and/or the faculty member's approach to teaching and mentoring).

### Assessment Grades will be calculated as follows:

CPL Assignments ( <i>five Modules – 22 points each Module</i> )	100
CPL Major Project ( <i>Refer to D2L</i> ) – <b>3 Deliverables</b>	120
Discussion ( <i>eight Modules, 5 points each Module</i> )	40
Quizzes	40
Test_1 – Midterm Exam	100
Test_2 – Final Exam	100
<b>Total</b>	<b>500</b>

- All the detailed points are in [D2L](#) - Weekly reports and final project

### Grading Scale:

Grade	Percentage	Point System
A	90% - 100%	450 - 500
B	80% - 89%	400 - 449
C	70% - 79%	350 - 399
D	60% - 69%	300 - 349
F	59% or below	299 - 0

### Withdrawal Policy:

The last day to withdraw without academic penalty is [shown on the course schedule](#). Ceasing to attend course via D2L or oral notice thereof DOES NOT constitute official withdrawal from the course. Students who simply stop participating course weekly via D2L without officially withdrawing usually are assigned failing grades. Students wishing to withdraw after the scheduled change period (add/drop) must obtain and complete a withdrawal form from the Academic Services Department in the Registrar's Office.

### Incomplete Policy:

I— The grade of “I” denotes an incomplete grade for the course, and will be awarded only when the student has done satisfactory work up to the last two weeks of the semester, but for nonacademic reasons beyond his/her control is unable to meet the full requirements of the course. A grade of “I” must be removed (by completing the course requirements) within one calendar year from the end of the semester in which the “I” was originally assigned. <http://www.kennesaw.edu/foreignlanguage/facultyinfo/IncompletePolicy.html>

### Enrollment Policy:

Only those students who are enrolled in the online course may visit the lectures, receive assignments, take quizzes and exams, and receive a grade for the course via D2L. If a student is administratively withdrawn from this course, they will not be permitted to participate in any online course activities nor will they receive any grade for the course.

### Email Messages:

Remember to put the course name and section number in the subject field of every e-mail message that you send me. E-mail messages that are missing this information are likely to be automatically redirected to a folder I seldom check.

**Diversity Statement:**

All courses offered by the Computer Science department will adhere to the KSU policy that prohibits discrimination on the basis of race, religion, color, sex, age, disability, national origin, or sexual orientation.

**Disability Statement:**

Any student with a documented disability needing academic adjustments is requested to notify the instructor as early in the semester as possible, and must do so before the mid-term exam. Verification from KSU disabled Student Support Services is required. All discussions will remain confidential.

[http://www.kennesaw.edu/stu\\_dev/dsss/dsss.html](http://www.kennesaw.edu/stu_dev/dsss/dsss.html)

**Student Email and Web Account Access:**

KSU is moving towards a central authentication server that will allow one username and password to be used by all KSU users to access an increasing variety of applications (email, D2L etc.) This unified network identification is referred to as your "NetID". The new source for university-provided email and web space for students will be located at [students.kennesaw.edu](http://students.kennesaw.edu) All students will have access to this system once they have established their NetID.

**How to Activate your NetID:**

To activate your NetID go to <http://netid.kennesaw.edu> and click on "Sign up Now!" link. You will be asked to provide information to verify your identity and set your password. This password will only be for NETID enabled applications.

**How to Look Up a NetID:**

After you have activated your NetID, you can look up other users by logging into <http://netid.kennesaw.edu> and clicking on Directory Search.

**How to Send Email:**

For student email, your NetID in combination with the new email address would look like <http://uits.kennesaw.edu/support/newstudents.php>

**Web Address:**

For student web address, your NETID in combination with the new server address would look like <http://uits.kennesaw.edu/support/newstudents.php> .

If you have problems please call the Service Desk at ext. 6999 or e-mail [service@kennesaw.edu](mailto:service@kennesaw.edu) .

**Acquiring Final Grades:**

In an effort to better utilize our technology resources, Kennesaw State University has instituted the reporting of end of term grades by phone. This is in addition to the web version of grades, which has been in effect for several terms. All current semester term students may call 770-420-4315 and select Option Number 4 to secure their end of term grades. With this new development, printed grade reports will not be mailed at the end of the term. Students needing verification of grades or enrollment should request either an official transcript or enrollment verification through the Office of the Registrar.

Any student with a documented disability needing academic adjustments is requested to notify the instructor as early in the semester as possible, and must do so before the mid-term exam. Verification from KSU disabled Student Support Services is required. All discussions will remain confidential.

**Academic Integrity Statement:**

Every KSU student is responsible for upholding the provisions of the Student Code of Conduct, as published in the Undergraduate and Graduate Catalogs. Section II of the Student Code of Conduct addresses the University's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records or academic work, malicious removal, retention, or destruction of library materials, malicious/intentional misuse of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of

the University Judiciary Program, which includes either an "informal" resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct's minimum one semester suspension requirement.

Students are encouraged to study together and to work together on class assignments and lab exercises; however, the provisions of the STUDENT CONDUCT REGULATIONS, II. Academic Honesty, KSC Undergraduate Catalog will be strictly enforced in this class.

Frequently students will be provided with "take-home" exams or exercises. It is the student's responsibility to ensure they fully understand to what extent they may collaborate or discuss content with other students. No exam work may be performed with the assistance of others or outside material unless specifically instructed as permissible. If an exam or assignment is designated "no outside assistance" this includes, but is not limited to, peers, books, publications, the Internet and the WWW. If a student is instructed to provide citations for sources, proper use of citation support is expected.

### **Computer Science Department Policies:**

Students are minded that the Computer Science Department has certain policies in place that govern practices within the department. Including:

- All courses used toward any undergraduate degree in the Computer Science Department must be completed with an assessed performance grade of "C" or better. This means that all prerequisite courses from the Computer Science Department must have been completed with a "C" or better in order for a student to enter the next course in a sequence.
- All requests for course overloads must be made through the department chair's office at <http://ccse.kennesaw.edu/cs/> . The Instructor of any course is not permitted to authorize course overloads.
- All requests for prerequisite bypasses must be made through the department chair's office at <http://ccse.kennesaw.edu/cs/> . The Instructor of any course is not permitted to authorize course overloads.
- All students are encouraged to register their current choice of major using the department change process at <http://ccse.kennesaw.edu/cs/> Students who are not recorded under their intended major may find that they may be limited from registering for courses they require to complete their intended program of study.
- To answer any questions about these or other departmental policies, please contact the chair's office

### **Communication Etiquette**

Communication Tool	Recommendations
Communication	Please use our course <b>D2L e-mail to communicate</b>
Instructor Response Time	Questions submitted to the instructor via D2L email or the discussion area will receive a reply within 24 hours. Weekends may take longer. All the assignments will be graded and provide feedback within a week. Please check your course progress on " <i>D2l home page</i> ," " <i>Grade Tab</i> ."
Emergencies	In the case of an emergency, use the email or phone number that is listed in the syllabus and on the home page.
Communication in General	Please use the instructor's university email account listed on the Home page and in the syllabus. <a href="mailto:ejung4@kennesaw.edu">ejung4@kennesaw.edu</a> or 470-578-5546
Communication with each other and the instructor	We want everyone to experience a positive experience in this class. Be sure when you have chats, or other types of discussions (such as with labs), that you always are respectful of each other. I will always be respectful of each of you.



## Tentative Course Schedule: Subject to Change

Dr. Sarah North [snorth@kennesaw.edu](mailto:snorth@kennesaw.edu)

Every Two Weeks Due Dates – Refer to D2L		Course Assignments
1	<b>Module_1</b>  <b>Aug 27</b>	Welcome- Login to <a href="http://D2L.kennesaw.edu/">http://D2L.kennesaw.edu/</a> and overview Course Start here <b>Module 1 - Preliminaries</b> Chapter 1: Characteristics of Programming Languages Java Prog Chapter 3: Syntax and Semantics <b>Assignment_1, Quiz, &amp; Discussions</b> Please <a href="#">Refer to D2L Learning Modules –</a> Mod_1 - Take action (Reading, Assignments, Tests, etc.) on each item listed)
2	<b>Module_2</b>  <b>Sep 3</b>	<b>Module 2 - Functional &amp; Logic Programming Languages</b> Chapter 3: Syntax and Semantics <b>Assignment_2, Quiz, &amp; Discussions</b> Please <a href="#">Refer to D2L Learning Modules –</a> Mod_2 - Take action (Reading, Assignments, Tests, etc.) on each item listed)
3	<b>Module_3</b>  <b>Sep 17</b>	<b>Module 3 - Lexical and Syntax Analysis</b> Chapter 4: – Lexical and Syntax Analysis Chapter 8: Statement-Level Control Structures <b>Project 1<sup>st</sup> Deliverable – Java Implementation and Descriptions</b> Please <a href="#">Refer to D2L Learning Modules –</a> & Discussions Mod_3 - Take action (Reading, Assignments, Tests, etc.) on each item listed)
4	<b>Module_4</b>  <b>Oct 1</b>  <b>Test_1</b>	<b>Module 4 - Names, Bindings, and Scope; and Data Types</b> Chapter 5: Names, Bindings, and Scope Chapter 6: Data Types <b>Assignment_3 &amp; Discussions</b> Please <a href="#">Refer to D2L Learning Modules –</a> Mod_4 - Take action (Reading, Assignments, Tests, etc.) on each item listed) <b>Test #1 – Ch. 1 – Ch. 6- Refer to D2L</b>
5	<b>Module_5</b>  <b>Oct 15</b>	<b>Module 5 - Expressions &amp; Assignment Statements &amp; Control Structures</b> Chapter 7: Expressions and Assignment Statements Chapter 8: Statement-Level Control Structures <b>Project 2<sup>st</sup> Deliverable - Pascal Implementation and Descriptions</b> Please <a href="#">Refer to D2L Learning Modules – Quiz</a> & Discussions Mod_5 - Take action (Reading, Assignments, Tests, etc.) on each item listed)
6	<b>Module_6</b>  <b>Oct 29</b>	<b>Module 6 - Subprograms and Implementations of Subprograms</b> Chapter 9: Subprograms Chapter 10: Implementing Subprograms <b>Assignment_4, Quiz, &amp; Discussions</b> Please <a href="#">Refer to D2L Learning Modules –</a> Mod_6 - Take action (Reading, Assignments, Tests, etc.) on each item listed)
7	<b>Module_7</b>  <b>Nov 12</b>	<b>Module 7 - Concurrency</b> Chapter 13: Concurrency <b>Project 3<sup>rd</sup> Deliverable - Ada Implementation and Descriptions</b> Please <a href="#">Refer to D2L Learning Modules –</a> & Discussions Mod_7 - Take action (Reading, Assignments, Tests, etc.) on each item listed)
8	<b>Module_8</b>  <b>Nov 23</b>  <b>Test 2</b>  <b>Dec 1- Dec 5</b>	<b>Module_8 - Functional &amp; Logic Programming Languages</b> Chapter 15: Functional Programming Languages <b>Assignment_5 &amp; Discussions</b> Please <a href="#">Refer to D2L Learning Modules –</a> Mod_8- Take action (Reading, Assignments, Tests, etc.) on each item listed) <b>Test #2 – Ch. 1 – Ch. 13 - Refer to D2L (Test_2 will be Open April 24–May 6)</b>