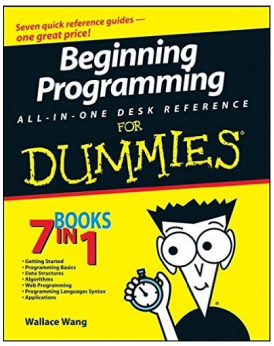
# CISM 400, Introduction to Programming, Syllabus
# (3 credits)

## COURSE DESCRIPTION

The Information Technology (IT) Major with a Concentration in Network Administration prepares students to glorify God through Christ-centered ethical leadership and vocational excellence in the IT field, with an emphasis on networks, security, web development, project and data management, and network administration. (Page 58 catalog)

## REQUIRED TEXTS & RESOURCES

Wang, W. (2008). Beginning Programming. Wiley Publishing, Hoboken, NJ ISBN-13: 978-0470108543, ISBN-10: 0470108541




Programming Languages Video; https://www.youtube.com/watch?v=fbZ4ZhzCeR4
dBase Video; https://www.youtube.com/watch?v=Ls_LzOZ7x0c
C Video; https://www.youtube.com/watch?v=CPjZKsUYSXg
Introduction to Networking; https://www.youtube.com/watch?v=rL8RSFQG8do

## COURSE SCHEDULE

Each course begins on a Wednesday with a Getting Started module before moving into the week 1-7 content. The introduce yourself forum is required during the Getting Started module in order to be counted present during this half-week of instruction. The introduce yourself forum is open from the start of the course to the first Sunday. All posts are due by Sunday at 11:59 p.m. Participation is required to be marked present for this time period. Keep in mind that in future weeks, forum due dates may be different.

Unless stated otherwise, graded assignments are due on the last day of the course week (Sunday). http://point.edu/course-schedules/

| | Learning Activities | Graded Assignments |
|---|---|---|
| **Preview Week** | **Course Introduction** | |
| | Review the Syllabus | **N/A** |

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|---|---|---|
| | Review Preview Week Introduction | **N/A** |
| | Participate in Course Orientation | **N/A** |
| | Introduce Yourself Forum (registers attendance) | Due in Preview Week by Day 3 (Wednesday)<br><br>**mandatory** |
| **Week 1** | | |
| | **Unit 1: Introduction to the Discipline** | |
| | Reading Book 1, Chapter 1: Getting Started, pages 1-26 | N/A |
| | Students will read Book 6, Programing Languages and Syntax pp. 521 - 541 in Beginning Programming Book | N/A |
| | Students will read, DeNisco Rayome, A. (2017). 7 programming languages that every developer<br><br>should learn in 2018. https://www.techrepublic.com/article/7-programming-languages-that-every-developer-should-learn-in-2018/ | N/A |
| | Students will read, Java Programming Language, https://en.wikipedia.org/wiki/Java_(programming_language) | N/A |
| | Students will read, The Java Tutorials; https://docs.oracle.com/javase/tutorial/index.html | N/A |
| | Students will read, JavaScript; https://en.wikipedia.org/wiki/JavaScript | N/A |
| | Students will watch video; Java scripting tutorial for beginners; https://www.youtube.com/watch?v=W6NZfCO5SIk | N/A |
| | Online Discussion Questions: Based on your text book readings and the video for this week answer the question, why do you think it is important for scriptures to be interpreted as they were originally written? For example, Luke 11:9-10 has been used to tell people that if you ask for something, such as a new car, God will provide it for you just like Santa does on Christmas morning. | Due Week 1 Day 5 (Friday) Initial Post. One participation post response by the end of the week Due Week 1 Day 7 (Sunday) |

| | | |
|---|---|---|
| | Assignment 1: Trouble shoot coding errors. Students will correct listed errors in multiple languages. Students will submit .txt file for this assignment. No APA formatting required for this assignment. | Due Week 1 Day 7 (Sunday) |
| | Assignment 2: 1-page paper, which compares and contrast two different types of programming languages and provide rationale for when each would be used in an industry setting. Paper is to be typed in 12pt Times New Roman font, formatted with double spacing and consist of at least 400 words of scholarly content. APA formatting required for paper. | Due Week 1 Day 7 (Sunday) |
| **Week 2** | Students will read Book 6, Programing Languages and Syntax pp. 559 -574 in Beginning Programming Book | N/A |
| | Students will read, Python, https://en.wikipedia.org/wiki/Python_(programming_language) | N/A |
| | Students will read, C++, https://en.wikipedia.org/wiki/C%2B%2B | N/A |
| | Students will read, C#, https://en.wikipedia.org/wiki/C_Sharp_(programming_language) | N/A |
| | Students will watch video; Learn Python – Full Course for Beginners, https://www.youtube.com/watch?v=rfscVS0vtbw | N/A |
| | Students will watch video; C++; https://www.youtube.com/watch?v=CPjZKsUYSXg | N/A |
| | Students will watch video; C# Tutorial for Beginners: Learn C# from Scratch; https://www.youtube.com/watch?v=gfkTfcpWqAY | N/A |
| | Online Discussion; Based on your text book reading explain why “you should not be anxious about anything, but in everything, by prayer and petition, with thanksgiving, present your requests to God” (Philippians 4:6). Do you think Paul had to understand this (verse 6) before he could say what he does in vs. 13? Why or why not? | Due Week 2 Day 5 (Friday) Initial Post. On e participati on post response by the end of the week Due Week 1 Day 7 (Sunday) |
| | Assignment 1: Students will have to evaluate three scenario and apply the applicable programming language to solve the scenario. Paper is to be typed in 12pt Times New Roman font, formatted with double spacing and consist of at least 400 words of scholarly content. APA formatting required for paper. | Due Week 2 Day 7 (Sunday) |
| **Week 3** | | N/A |

| | | |
|---|---|---|
| | Students will read Book 5, Web Programming, Chapter 4, PHP pp. 497 - 508, in Beginning Programing book. | N/A |
| | Students will read Book 6, Programing Languages and Syntax pp. 559 -574 | |
| | Student will read, PHP, https://en.wikipedia.org/wiki/PHP | N/A |
| | Student will read, Perl, https://en.wikipedia.org/wiki/Perl | N/A |
| | Students will complete PHP tutorial; https://www.w3schools.com/php/php_intro.asp - https://www.w3schools.com/php/php_exception.asp | N/A |
| | Students will watch video; PHP Programming Part 1: Introduction to PHP Programming; https://www.youtube.com/watch?v=27dR_sLaM74 | N/A |
| | Students will watch video; Coding 101 21: Perl: Getting Started, https://www.youtube.com/watch?v=FEtI4BLzzp8&list=PLTmR6HsT7005r9J50_HCOGkyGc8dDYu7J | |
| | Online Discussion; Students will answer question, Based on your readings and the video for this week answer the questions. What do we do when we are challenged in our beliefs? What is something we have been taught turns out to be contrary to scripture? | Due Week 3 Day 5 (Friday) Initial Post. One participation post response by the end of the week Due Week 1 Day 7 (Sunday) |
| | Assignment; Students will write 1-page paper, which compares and contrast PHP to Perl. Student has to provide rationale for when each programming language would be used in an industry setting. Paper is to be typed in 12pt Times New Roman font, formatted with double spacing and consist of at least 400 words of scholarly content. APA formatting required for paper. | Due Week 3 Day 7 (Sunday) |
| | Assignment; Trouble shoot coding errors. Students will correct listed errors in PHP and Perl languages. Students will submit .txt file for | Due Week 3 Day 7 (Sunday) |
| **Week 4** | Students will read Book 3, Data Structures in Beginning Programming pp. 309 - 375in Beginning Programming Book. | N/A |
| | Students will watch video; Data Structures & Algorithms # 1 – What are Data Structures? | N/A |
| | https://www.youtube.com/watch?v=bum_19loj9A | N/A |

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|---|---|---|
| | Students will watch video; Data Structures Crash Course; https://www.youtube.com/watch?v=DuDz6B4cqVc | N/A |
| | Students will watch video; Linked List; Set 1, https://www.youtube.com/watch?v=ge8iG7JecR4 | N/A |
| | Students will watch video; Linked List; Set 2; https://www.youtube.com/watch?v=zgCROSijBRw | N/A |
| | Students will watch video; Collections and Dictionaries; https://www.youtube.com/watch?v=Z21X2ddJa6k | N/A |
| | Students will watch video; Data Structures: Stacks and Ques; https://www.youtube.com/watch?v=wjI1WNcIntg | N/A |
| | Students will watch video; Graphs and Trees; https://www.youtube.com/watch?v=bEJnNSSarz0 | N/A |
| | Online Discussion Question: Students will answer question We can identify the paradigm in which a programming language is classified based on its features. In John 13:34-35, Jesus tells us the way His disciples can be identified: Love. More specifically, it's how we love one another. In English, we use the word love quite broadly. For example, we say we love a sports team, love a certain type of food, or we loved the vacation that we just returned from. So, what does Jesus actually mean here? Thankfully, Scripture teaches us, in 1 Corinthians 13:4-7, what this love should look like.<br><br>- Describe one thing that the Christian Church does that exemplifies what 1<br><br>Corinthians 13 describes as love.<br><br>- Discuss one thing that the Christian Church needs to do better to represent this<br><br>description of love.<br><br>- Explain one thing that the Christian Church should immediately stop doing, based on<br><br>what 1 Corinthians 13 teaches. | Due Week 4 Day 5 (Friday) Initial Post. On e participati on post response by the end of the week Due Week 1 Day 7 (Sunday) |
| | Assignment: Students will write 1-page paper, comparing and contrasting two different types of data structures and provide rationale for when each would be used in an industry setting. Paper is to be typed in 12pt Times New Roman font, formatted with double spacing and consist of at least 400 words of scholarly content. APA formatting required for paper. | Due Week 4 Day 7 (Sunday) |
| | Quiz: Students will complete Data Structures multiple choice quiz; | Due Week 4 Day 7 (Sunday) |

1. Which of the following data structures falls under the category of a dictionary?

a. Harsh table

b. Hash

c. Tree

d. Linked list

2. Which of the following could best be described by the graph structure?

a. Algebraic problems

b. Roads connecting cities

c. Graphical User Interface (GUI)

d. Given a word, finding its definition

3. If you have a sorted, balanced binary tree with 15 elements in it, how many steps, maximum, will it take you to decide whether an element is present in the tree?

a. Four

b. Fifteen

c. Three

d. Depends on the computer

4. Which of these is true about a set?

a. The elements are kept in order

b. All of the above

c. They can only hold numbers

d. There are no duplicates

| | | |
|---|---|---|
| | 5. A vector (an indexed, growable list) would most likely be implemented on top of which of these structures?<br><br>a. Stack<br><br>b. Hash table<br><br>c. Linked list<br><br>d. Tree | |
| **Week 5** | Students will read Hofstedt, P. (2010). Constraint-based object-oriented programming. IEEE Software, 27(5), 53-56. | N/A |
| | Students will read, Logic Programming | N/A |
| | Students will read, Applied Mathematical Modeling | N/A |
| | Students will read, Symbolic programming; https://en.wikipedia.org/wiki/Symbolic_programming | N/A |
| | Students will read, Comparison of programming paradigms; https://en.wikipedia.org/wiki/Comparison_of_programming_paradigms | N/A |
| | Students will watch video; 4 Programming Paradigms in 40 Minutes; https://www.youtube.com/watch?v=cgVVZMfLjEI | N/A |
| | Students will watch video; Programming Paradigms and Language Concepts; https://www.youtube.com/watch?v=lqmMqtgWpms | N/A |
| | Students will watch video; Comparing Programming Paradigms; https://www.youtube.com/watch?v=fk1kwa_ctL8 | N/A |
| | Students will watch video; Programming Languages: The Logic Programming Paradigm – 1; | N/A |
| | Online Discussion Question: Based on your text book reading We can identify the paradigm in which a programming language is classified based on its features. In John 13:34-35, Jesus tells us the way His disciples can be identified: Love. More specifically, it's how we love one another. In English, we use the word love quite broadly. For example, we say we love a sports team, love a certain type of food, or we loved the vacation that we just returned from. So, what does Jesus actually mean here? Thankfully, Scripture teaches us, in 1 Corinthians 13:4-7, what this love should look like.<br><br>- Describe one thing that the Christian Church does that exemplifies what 1<br><br>Corinthians 13 describes as love.<br><br>- Discuss one thing that the Christian Church needs to do better to represent this<br><br>description of love. | Due Week 5 Day 5 (Friday) Initial Post. One participation post response by the end of the week Due Week 1 Day 7 (Sunday) |

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|---|---|---|
| | - Explain one thing that the Christian Church should immediately stop doing, based on<br><br>what 1 Corinthians 13 teaches. | |
| | Assignment 1: ; Students will write 1-page paper, which compares and contrast two different types of programming paradigms and provide rationale for when each would be used in an industry setting. Paper is to be typed in 12pt Times New Roman font, formatted with double spacing and consist of at least 400 words of scholarly content. APA formatting required for paper. | Due Week 5 Day 7 (Sunday) |
| **Week 6** | Students will read; SQL, https://en.wikipedia.org/wiki/SQL | N/A |
| | Students will read; SQL Overview, https://www.tutorialspoint.com/sql/sql-overview.htm | N/A |
| | Students will read; SQL Tutorial; https://www.techonthenet.com/sql/index.php | N/A |
| | Students will read; SQL Expressions; https://docs.oracle.com/cd/B28359_01/server.111/b28286/expressions001.htm#SQLRF52045 | N/A |
| | Students will read; SQL Predicates; https://en.wikipedia.org/wiki/Where_(SQL) | N/A |
| | Students will read; Select (SQL); https://en.wikipedia.org/wiki/Select_(SQL) | N/A |
| | Students will read; Whitespace character; https://en.wikipedia.org/wiki/Whitespace_character | |
| | Students will watch video; Video, SQL Full course for beginners; https://www.youtube.com/watch?v=HXV3zeQKqGY | |
| | Students will watch video; SQL Tutorial for Beginners; https://www.youtube.com/watch?v=_vFiyFaQCPA | |
| | Students will watch video; SQL Crash Course; https://www.youtube.com/watch?v=nWeW3sCmD2k | |
| | Students will watch video; SQL: Learning the basics of the SELECT statement; https://www.youtube.com/watch?v=SoxHivg9Ldwex | |
| | Students will complete tutorial; https://www.w3schools.com/sql/ | |
| | Students will complete tutorial; https://data-flair.training/blogs/sql-tutorial/ | |
| | Online Discussion Question: : Students will answer question, Based on your readings explain how this verse from James 4:1-2 would apply to actively managing a help desk and why. “What causes quarrels and what causes fights among you? Is it not this, that your passions are at war within you? You desire and do not have, so you murder. You covet and cannot obtain, so you fight and quarrel. You do not have, because you do not ask.” | Due Week 6 Day 5 (Friday) Initial Post. One participation post |

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| | | response by the end of the week Due Week 1 Day 7 (Sunday) |
| | Assignment: Students will analyze provided scenario and write a paper which analyzes how a corporation's greed over took common good. Students will have to apply Biblical reference of their choosing to support their argument. APA formatting is required along with one scholastic reference, and one Biblical reference. | Due Week 6 Day 7 (Sunday) |
| **Week 7** | Reading Book 5 Chapter 1: Web Programming, pages 461 - 496 | N/A |
| | Students will read; Data definition language; https://en.wikipedia.org/wiki/Data_definition_language | N/A |
| | Students will read; Data manipulation language; https://en.wikipedia.org/wiki/Data_manipulation_language | N/A |
| | Students will read; SQL\| DDL, DML, DCL and TCL commands; https://www.geeksforgeeks.org/sql-ddl-dml-dcl-tcl-commands/ | N/A |
| | Students will read; Basic SQL statements; http://www.tomjewett.com/dbdesign/dbdesign.php?page=ddldml.php | N/A |
| | Students will watch video; DDL Statements in sql; https://www.youtube.com/watch?v=6kg_LJZqy6s | N/A |
| | Students will watch video; Using DDL Statements to Create and Manage Tables; https://www.youtube.com/watch?v=b32RhNmvnO4 | N/A |
| | Students will watch video; Introduction to DML statements; https://www.youtube.com/watch?v=yhr_zd-qzAc | N/A |
| | Students will watch video; dml in sql with examples; https://www.youtube.com/watch?v=WvOseanUdk4 | N/A |
| | Students will watch video; Lecture Database Systems – DML/DDL; https://www.youtube.com/watch?v=yhr_zd-qzAc | N/A |
| | Online Discussion Question ; Students will answer question, Based on your readings explain how does this verse from Jeremiah 29:11 apply to Christians today? "For I know the plans I have for you declares the Lord plans to prosper you and not harm you, plans to give you hope and a future". | Due Week 7 Day 5 (Friday) Initial Post. One participation post response by the end of the |

| | | |
|---|---|---|
| | | week Due Week 1 Day 7 (Sunday) |
| | Assignment 1: ; Students will write 1-page paper, which answers the following questions,<br><br>* Explain DML and DDL statements with examples?<br><br>* what is the first thing you will check for, if the query below is performing very slow?<br><br>SELECT * FROM tblProducts ORDER BY UnitPrice ASC<br><br>* What is the significance of an Index on the column used in the GROUP BY clause?<br><br>* What is the role of an Index in maintaining a Unique column in table?<br><br>Paper is to be typed in 12pt Times New Roman font, formatted with double spacing and consist of at least 400 words of scholarly content. APA formatting required for paper. | Due Week 7 Day 7 (Sunday) |

## GRADING POLICIES

### Course Evaluation Plan

An assessment instrument (checklist, rubric, quiz, etc.) will accompany each major graded assignment. See the instructions for specific assignment criteria and accompanying grading instruments.

### Points Distribution

Graded assignments will be distributed as follows:

| Graded Assignments | Points Possible |
|---|---|
| Introduction (1 x 15 pts.) (1 response meet and greet 5 pts.) | 20 |
| Discussion Forums (8 x 35 pts) | 280 |
| Assignments (9 x 50 pts) | 450 |
| Quiz | 25 |
| **Total Points:** | 775 |

### Final Grades

The following scale will be used when calculating final grades:

| | | | |
|---|---|---|---|
| A | 90-100% | D | 60-69% |
| B | 80-89% | F | 0-59% |
| C | 70-79% | | |

Final grades will be posted according to the Academic Calendar:
http://point.edu/academic-calendar/

## COURSE LEARNING GOALS & OBJECTIVES

| **Goal 1:** Equip students with foundational knowledge and skills in information technology. | | **Program Objective(s)** |
|---|---|---|
| | **Objective 1.1:** Equip students to apply basic programming knowledge and data management skills. | **8.1** |
| | **Objective 1.2:** Students will able to identify data structures, algorithms, and paradigms through use case scenarios. | **8.1** |
| | **Objective 1.3:** Students will be introduced to a variety of programming languages. | **8.2** |
| | **Objective 1.4:** Students will be able to work with and trouble shoot a variety of programming languages. | **8.2** |
| | **Objective 1.5:** Students will be able to identify when to use different data organization structures in industry settings. | **8.3** |
| | **Objective 1.6:** Students will explain the use of Standard Query Language (SQL) in an industry setting. | **8.4** |

## DISABILITY SERVICES

Point University is committed to providing qualified students with disabilities an equal opportunity to access a Point education through the provision of reasonable and appropriate accommodations and support services. Accordingly, Point complies with Title IX (https://point.edu/title-ix) of the Educational Amendments of 1972 and the subsequent reauthorization of that act, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990 and subsequent amendments to that act. For more information about Disability Support Services, see the "Consumer Information" section of the website (http://point.edu/disclosures) and the "Student Services" section of this catalog, or contact the Director of Disability Services and College Section 504 Coordinator, at disability.services@point.edu.

## COURSE EXPECTATIONS

*Attendance*

A student is expected to actively participate in each week of the class in which he or she is enrolled. Active participation each academic week includes submitting classwork in one or more

of the following activities within the course during the week they are due: discussion forums, assignments such as (but not limited to) projects, papers, presentations, case studies, quizzes, or exams. Students may be absent up to 25% of the class. After absences exceed 25% of the session or term's total – in either consecutive or cumulative days – the student will be withdrawn from the class roster and assigned a grade on the basis of work completed at the time of withdrawal unless, because of exceptional circumstances, prior arrangements have been made with the professor and the Chief Academic Officer.

Students representing the university, such as student-athletes, remain responsible for submitting work online within the week it is due to be counted present. No student will be disadvantaged while representing the university. However, the responsibility is on the student to notify faculty no later than one week before missing class for any reason, to ensure time for content to be made available to them and for make-up work to be considered and arranged. It is expected that students will limit their absences outside of these required absences, as they will be dropped if they overcut the allowed number of absences.

The full attendance policy is found in the catalog (https://point.edu/catalogs/).

*Etiquette & Netiquette*
Students are expected to be respectful and well-mannered towards the instructor and their peers, whether in the physical classroom or the online course site. For guidance on meeting this expectation, particularly in the online environment, please see the materials provided during student orientation or reach out to advising.center@point.edu.

*Policies*
For academic policies governing attendance, late assignments, and student support, please refer to the Academic Catalog directly (https://point.edu/catalogs/).

## COPYRIGHT AND FURTHER DISSEMINATION