



ALASKA TECH LEARNERS

Dear instructional leader,

I am writing to remind you that “Alaska Tech Learners” continues on in 2021. We will be offering six different classes for students and a corresponding course for teachers as an ED A565 “Teaching of Computing” course. All courses are 3 credits and are intended as semester-based courses. The tuition and fees for each course is paid by the National Science Foundation, who sponsors this project. The spring semester 2021 offerings include:

CIS A110	Computer Concepts in Business
TECH A120	Commercial Web Page Design
TECH A125	Web Database Systems
CS A109	Compiled Programming Languages

“Computer Concepts in Business” is the introductory course and it covers Microsoft Office. The other three courses are the foundation courses for a web engineering program. In terms of sequencing, I recommend that you take TECH A120 next and then take the Compiled Programming Language course and the Web Database course in either order. Attachments detailing each course’s weekly topic is included as part of this message.

The four foundation courses come with a complete curriculum on a thumb drive that includes video lectures, multiple labs, and an optional vocabulary, quizzes, and readings, and a weekly assignment. For the college credit, students are also required to complete the weekly assignment, the online quiz, and make a weekly posting to Blackboard. The ideal way to use this curriculum is to have your local teachers lead the instruction as a computing course that gives your students high school credit for completing this course while the students also turn in their assignments to me, so that they can also be awarded college credit for their work.

In terms of course difficulty, these are college-level courses that teach software engineering. These are not introductory computer courses and they’re intended for people who have an interest in wanting to become IT professionals.

If you have any questions, please contact me by phone at (907) 834-1633 or by email at swjohnson@alaska.edu.

A handwritten signature in black ink that reads "Steven W. Johnson". The signature is written in a cursive, slightly slanted style.

Steven W. Johnson
Associate Professor of Computing/Information Technology
Prince William Sound College



ALASKA TECH LEARNERS SPRING SEMESTER 2021



CIS A110 COMPUTER CONCEPTS IN BUSINESS 3 CR CRN: 36784

Employs popular productivity software, operating system software, and computer hardware from a business perspective. Examines personal computer software packages, the information processing cycle, and beginning programming concepts. Emphasizes solving business problems utilizing spreadsheet and database software applications. Proficiency in using a computer is expected.

- Week 1: Course Introduction
- Week 2: Single-Page Documents
- Week 3: Multi-Page Documents
- Week 4: Multi-Author Documents
- Week 5: Word Wrap-Up
- Week 6: PowerPoint Essentials
- Week 7: Presentations, Transitions & Animations
- Week 8: PowerPoint Templates
- Week 9: Excel Basics & Calculations
- Week 10: Excel Tables & Functions
- Week 11: Excel Sheets & Charting
- Week 12: Introduction to Databases
- Week 13: Querying Related Tables
- Week 14: Final Project
- Week 15: Final Exam

**University level
course
in computer
science!**

**FREE TUITION FOR PARTICIPATING HIGH
SCHOOL TEACHERS & STUDENTS!**

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EMAIL:

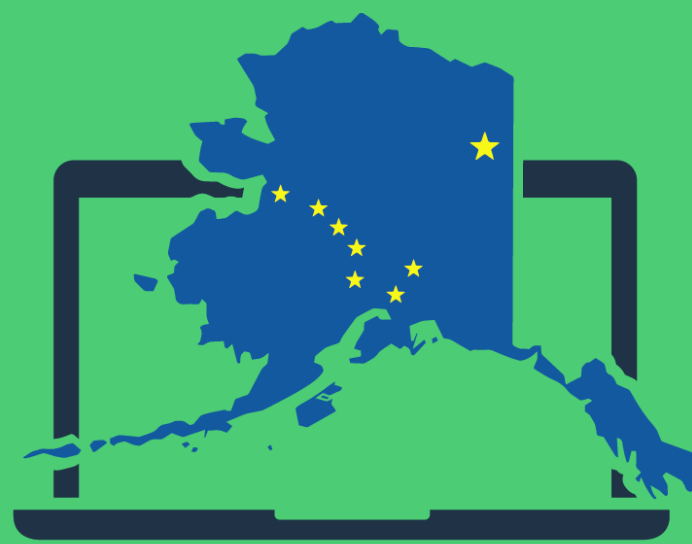
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CS A109 COMPILED PROGRAMMING LANGUAGES 3 CR

CRN: 36776

Teaches problem analysis and solution generation using the Python programming language. Also covers foundational concepts of computing such as problem solving, best practices in programming, basic syntax, sequential, branching, and iterative execution, arrays, data representation, and an introduction to computer hardware and networking fundamentals

- Week 1: Course Introduction
- Week 2: Variables & Data Types
- Week 3: Decisions & Conditional Statements
- Week 4: Boolean Logic
- Week 5: Loops
- Week 6: Control Statements
- Week 7: Characters, Strings & String Functions
- Week 8: Midterm Exam
- Week 9: CPU & Machine Language
- Week 10: Arrays
- Week 11: Functions: Parameters, Scope & Stack
- Week 12: Pointers
- Week 13: Input & Output
- Week 14: Project
- Week 15: Final Exam

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TECH A120 COMMERCIAL WEB PAGE DEVEL. 3 CR
CRN: 36929

Uses responsive, mobile-first design principles to create accessible, cross-device, commercially-oriented web sites using current versions of Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS).

- Week 1: Course Introduction & Text Elements
- Week 2: More Text & Web Imagery
- Week 3: "Space" Web Site
- Week 4: Page Design
- Week 5: Positioning Semantic Layers
- Week 6: Responsive Web Design
- Week 7: "7 Wonders of the Ancient World"(Project)
- Week 8: Midterm
- Week 9: Display & Layout Tables
- Week 10: Forms
- Week 11: Bootstrap Templates & Grid Designs
- Week 12: Client-Side Scripting & JavaScript
- Week 13: Server-Side Scripting & PHP
- Week 14: Working With Multimedia
- Week 15: Final Project & Certification Exams

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SPRING SEMESTER 2021



TECH A125 WEB DATABASE SYSTEMS 3 CR

Teaches commercial-grade database skills needed to create and administer dynamic data-driven sites used in eCommerce and mobile application development.

CRN: 36930

Week 1: Course Introduction
Week 2: Tables
Week 3: Relating Tables & Normalization
Week 4: Working with Related Data
Week 5: Querying
Week 6: Querying, Continued
Week 7: Subqueries
Week 8: Midterm Exam
Week 9: Database Administration
Week 10: PHP & MySQL
Week 11: Login Tables; Login Code
Week 12: Stored Procedures, Transactions & Events
Week 13: Java Databases & JavaDB
Week 14: Mobile Databass & SQLite
Week 15: Final Exam

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