Catalog Description
CS 135, Computer Science I
Lecture+Lab: (3+1)
Credit(s): 3
Introduction to modern problem solving and programming methods. Emphasis is placed on algorithm development. Introduction to procedural and data abstraction, emphasizing design, testing, and documentation.

Prerequisite(s): MATH 127 or MATH 128 or MATH 181 or MATH 182 or ACT Math score of 28 or SAT Math score of 630 or Accuplacer EA 80 and CL 101

Textbook

Course Objectives
This course introduces students to the essential enterprises of computer science and the art of programming. We will use more than one programming language and cover the following topics.

- Computers and computing, privacy, and ethics
- Program organization and threads
- Expressions
- Assignment, decisions, and iteration
- Functions and parameter passing
- One and Two Dimensional Arrays
- Pointers, Structs

Course Arrangement
The course has two components: Lecture and Laboratory. Both lecture and lab components are mandatory. Note specifically that the laboratory component is mandatory. All assignments, home-work, quizzes, and exams are required.

Office Hours
David Feil-Seifer:
- T,W,R 11 a.m- noon
And by appointment (email dave@cse.unr.edu for an appointment)

SEM 218

Monica Nicolescu:
MTW 11 a.m. – Noon
And by appointment (email monica@cse.unr.edu for an appointment)
SEM 239

Teaching Assistants and Fellows:
We have five graduate teaching assistants and seven undergraduate teaching fellows. Their names, hours (check calendar), and contact information are on the class website at awesome.cse.unr.edu. Get to know them well.

Teaching Assistants:
TAs conduct labs. All labs are on Mondays

- Vahid Behzadan: –
  Labs: 1205(12:00-12:50), 1203 (13:00-13:50)
  Office Hours: Mon&Fri 11 to 13.
- Ebrahim Emami: –
  Labs: 1103 & 1104 (10:00-10:50), 1104 (11:00-11:50)
  Office hours: 10:00 am - 1:00 pm on Thursdays, 11:00 am - 12:00pm on Fridays
- Sandeep Mathew: –
  Labs: 1101 (8:00 am to 8:50 am), 1207 (5:00 pm to 5:50 pm),
  Office Hours: 1pm to 4pm on Sundays , 3pm to 4pm on Wednesday
- Deepak Gurung: –
  Labs: 1206 (5:00 pm – 5:50 pm)
  Office hours: Saturday 9:00 am – 11 am, 1:00 pm – 3:00 pm , 1:00 pm – 2:00 pm Friday.
- Touqeer Ahmad: –
  Labs: 1204 (2:00-- 2:50pm), 1201 (3:00--3:50pm)
  Office Hours: 11am--1:00pm, 3:00--5:00pm Thursdays

Check the CS135 calendar for changes, updates, current hours.

Teaching Fellows:
TFs conduct workshops. Check the calendar for time and place.

1. Chris Forkner
2. Helen Medrano
3. Kate Niday
4. Evan Su
5. Kurt Andersen
6. Nathan Sullivan
7. Vineeth Rajamohan

Please check the CS135 calendar online for their current workshop and lab office hours.
Important Dates

- Midterms:
  - Midterm 1: Sep 29th during class.
  - Midterm 2: Nov 3rd during class.
- CS135 Hackathon: Dec 6, 6:00 p.m. through Dec 7, 8:00 a.m.
- Final Project Fair: All Day Dec 7th during lab
- Final Exam: Tuesday, December 15th 8:00am-10:00am in DMS 110. Note that there are NO alternative times for this exam. **If you cannot take the final exam on this date and time, you must drop this class and take it during another semester.**

Assignments

There are two types of assignments: programming assignments and exercises. Exercises consist of practice questions intended to assist students in mastering course content by identifying, learning, and practicing with core concepts. Some of these exercises may be collected and graded, but you will be informed in advance when an exercise is to be handed in.

Programming assignments require designing, implementing, and perhaps demonstrating your solutions to posed problems. We will be using the Ubuntu 14.04 distribution of the linux operating system (OS) and you may work on any of the machines in the Engineering Computing Center [www.ecc.unr.edu](http://www.ecc.unr.edu) in SEM 231. You may also install the CS135 environment on your machine. Instructions and support for this will be on [awesome.cse.unr.edu](http://awesome.cse.unr.edu). Each programming assignment will be posted on awesome.cse.unr.edu and come with submission instructions.

The final project near the end of the semester will be a substantial exercise in designing and programming a group solution to an interesting problem.

Challenge Assignments

If you are not sufficiently challenged by the class assignments, you may attempt challenge assignments for extra credit. **Honors students are required to complete challenge assignments.**

Workshops

CS135 Teaching Fellows will hold workshops to pose and work through interesting problems that clarify your thinking on computers, computing, and programming. These workshops will be fun, informative, and helpful for doing well in the course. Prior students have stated that workshops made a significant positive difference in their performance. We expect that students going to these workshops will do significantly better on assignments and exams. Workshop topics and locations will be found on the online class calendar at [awesome.cse.unr.edu](http://awesome.cse.unr.edu).

Teaching Assistants and Teaching Fellows debugging hours

Teaching assistants and teaching fellows will hold lab office hours in the ECC to help you with your programming assignments. These hours will be found on the online class calendar at awesome.cse.unr.edu.
Course Rules and Academic Dishonesty
- Late programming assignments or exercises will be accepted for 3 days after the assignment is due, with a 20% per day penalty.
- Exams are individual efforts. A severe penalty will be given for collusion or other form of academic dishonesty. The usual penalty for academic dishonesty on assignments or an exam is failure in the course.
- Carefully read the section on Academic Standards Policy For Students found at the Office of Student Conduct website at http://www.unr.edu/student-conduct. Your continued enrollment in this course implies that you have read documents on this website.
- For individual assignments, do not show, exchange, or copy code. Using another person’s code or having another person “ghost write” a lab will be considered academic dishonesty.
- Cheating, plagiarism or otherwise obtaining grades under false pretenses” constitute academic dishonesty according to the UNR’s code. Academic dishonesty will not be tolerated and penalties can include canceling a student’s enrollment without a grade, giving an F for the course or for the assignment. For more details, see the University of Nevada, Reno General Catalog.

Grading and Assessment
- We will use the plus/minus grading system. Your grade will be one of A, A-, B+, B, B-, C+, C, C-, D+, D, D-, or F.
- There will be a number of programming and other assignments. No late assignments will be accepted.
- There will be two midterms and a final exam.
- The Final Exam is Tuesday December 15 2015 from 8:00-10:00 a.m. in class. This CANNOT be changed. If you cannot make this date and time you must drop this course.
- There will be announced and unannounced quizzes.
- Note: Failure in either the programming (assignments and final project) component or the lecture component (exercises, quizzes, and exams) will result in failure in the course.

Your final grade will be based on:

<table>
<thead>
<tr>
<th>Item</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Programming assignments</td>
<td>40%</td>
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<tr>
<td>Final Project</td>
<td>10%</td>
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<tr>
<td>Midterm exams</td>
<td>20% (10% each)</td>
</tr>
<tr>
<td>Exercises and Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
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</tbody>
</table>

Student Learning Outcomes
- 3, 5 Students will be able to demonstrate that they can analyze simple problem statements to identify relevant information and design small computer programs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability to solve such problems (ABET 3, 5).
11. Students will be able to demonstrate that they can use a modern programming language and development environment to design and implement small computer programs (ABET 11).

13. Students will be able to demonstrate that they can use relevant design and development principles in the construction of simple computer programs (ABET 13).

Silver Core objectives

- Silver Core Objectives. The Silver Core objectives support fourteen competencies that all graduating University of Nevada, Reno students should have. These objectives enhance the University’s core curriculum and ensure that graduates are broadly educated, thoughtful citizens prepared for a life in a globalized, diverse, and rapidly changing world. A course may satisfy or develop competency in an objective; the following is specified for this course:

  - This course satisfies Core Objective 12, Application, with at least five weeks of instruction and student engagement. Part of Silver Vein III, Advanced Areas of Focused Inquiry, this learning objective’s brief description is: “Students will demonstrate understanding of the ethical principles in general or in application of specialized knowledge, results of research, creative expression, or design processes. Students will demonstrate an ability to recognize, articulate, and apply ethical principles in various academic, professional, social, or personal contexts.”

Mapping

Student outcome 3 is mapped to UNR’s Silver Core Objective 12.

Assessment

<table>
<thead>
<tr>
<th>CSE SLO/CO</th>
<th>Course Specific SLO</th>
<th>Assessment Methods</th>
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<tbody>
<tr>
<td>3/CO12</td>
<td>Students will be able to demonstrate that they can analyze simple problem statements to identify relevant information and design small computer programs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability to solve such problems (ABET 3, 5)</td>
<td>At least one programming assignment on methods of protecting privacy and the ethical and security issues concerned with private information storage, lifetime, and transmission. Final project will assess ethical code attribution and working in teams.</td>
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<tr>
<td>5</td>
<td>same</td>
<td>Programming projects and exams</td>
</tr>
<tr>
<td>11</td>
<td>Students will be able to demonstrate that they can use a modern programming language</td>
<td>Programming Projects and exams</td>
</tr>
<tr>
<td>Week</td>
<td>Period</td>
<td>Contents</td>
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</tr>
<tr>
<td>13</td>
<td></td>
<td>Students will be able to demonstrate that they can use relevant design and development principles in the construction of simple computer programs (ABET 13).</td>
</tr>
</tbody>
</table>

### Disability Services
Any student with a disability needing academic adjustments or accommodations is requested to speak with me or the Disability Resource Center (Thompson Building, Suite 101) as soon as possible to arrange for appropriate accommodations.

### Academic Success Services
Your student fees cover usage of the Math Center (784-4433 or www.unr.edu/mathcenter/), Tutoring Center (784-6801 or www.unr.edu/tutoring-center), and University Writing Center (784-6030 or http://www.unr.edu/writing-center). These centers support your classroom learning; it is your responsibility to take advantage of their services. Keep in mind that seeking help outside of class is the sign of a responsible and successful student.

### Audio and Video Recording
Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may have been given permission to record class lectures and discussions. Therefore, students should understand that their comments during class may be recorded.

### Communications
If we need to communicate with the class as group we will post a message on our class web page. Class notes, lecture slides, and program examples will all be posted to this webpage as well. By this point in the syllabus you know that the class web page is at awesome.cse.unr.edu. You are expected to check the class web page every day. If we need to communicate with a specific student we will email you at the email on file with UNR. We expect you to check your email every day. The most current version of this syllabus will always be found at: awesome.cse.unr.edu

### Tentative Schedule CS 135 Introduction to Computing Fall 2015

<table>
<thead>
<tr>
<th>Week</th>
<th>Period</th>
<th>Contents</th>
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<tbody>
<tr>
<td></td>
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<td>CO-12 addressed in total = 6.5 weeks; the remaining 8.5 weeks are for other</td>
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<tr>
<td>1</td>
<td>Aug 25, 27</td>
<td>Introduction, course syllabus, ethical code sharing practices, Programming in Scratch</td>
</tr>
<tr>
<td>2</td>
<td>Sep 1, 3</td>
<td>Introduction to C, C fundamentals, formatted input/output, expressions, comments to support ethical business practice</td>
</tr>
<tr>
<td>3</td>
<td>Sep 8, 10</td>
<td>Expressions, selection statements, loops</td>
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</tbody>
</table>
| 4 | Sep 15, 17 | Loops, basic types  
Project: data security involving text encoding | 1 week CO-12 (CSE SLO 3) |
<p>| 5 | Sep 22, 24 | Arrays, mid-term review | |
| 6 | Sep 29, Oct 1 | Mid-term, Arrays | |
| 7 | Oct 6, 8 | Functions, comments to support ethical business practice | 0.5 week CO-12 (CSE SLO 3) |
| 8 | Oct 13, 15 | Program organization (ethical practice), pointers (data integrity) | 1 week CO-12 (CSE SLO 3) |
| 9 | Oct 20, 22 | Pointers and arrays (data integrity) | 0.5 week CO-12 (CSE SLO 3) |
| 10 | Oct 27, 29 | Strings, mid-term review | |
| 11 | Nov 3, 5 | Mid-term, The pre-processor, declarations, Final project assigned (ethical practices, “code attribution”, working in teams) | 1 week CO-12 (CSE SLO 3) |
| 12 | Nov 10, 12 | Writing large programs, input/output | |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Nov 17, 19</td>
<td>Input/output, structs, unions, enum</td>
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<tr>
<td>14</td>
<td>Nov 24</td>
<td>Advanced uses of pointers</td>
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<tr>
<td>15</td>
<td>Dec 1, 3</td>
<td>Advanced uses of pointers, low level programming</td>
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<tr>
<td></td>
<td></td>
<td>Final project mid-point, assessment on code attribution practices</td>
<td>0.5 week CO-12 (CSE SLO 3)</td>
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<tr>
<td>16</td>
<td>Dec 8</td>
<td>Final exam review</td>
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<tr>
<td></td>
<td></td>
<td>Final project presentation and assessment during labs (ethical practices, “code attribution”, working in teams)</td>
<td>0.5 week CO-12 (CSE SLO 3)</td>
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</tbody>
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