RIT Department of Computer Science

Course Home Page

# CSCI 141 Syllabus

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## Catalog Description

This course serves as an introduction to computational thinking using a problem-centered approach. Specific topics covered include the following: expression of algorithms in a programming language; functional and imperative programming techniques; control structures; problem solving using recursion; basic searching and sorting; elementary data structures such as lists, trees, and graphs; and correctness, testing and debugging. Assignments, both in-class/lab and for homework, require analysis and a code implementation, and are an integral part of the course. A course project also is required.

## Course Outcomes

- Students will apply the theory and principles of computer science. *Evaluation: group problem-solving activities, laboratory assignments, projects, and exams.*
- Students will demonstrate fluency in high-level programming languages, environments, and tools for computing. *Evaluation: laboratory assignments and projects.*
- Students will prepare technical documents and make effective oral presentations. *Evaluation: team problem-solving activities.*

CSCI 141 is part of a one year introduction, and the next course in the sequence is CSCI 142. The prerequisite for enrolling in CSCI 142 is passing CSCI 141 with a minimum grade of C-.

## Contact Information

See Instructors.

For issues with CS accounts or lab systems, the email for system administration problem reporting is gccisit@rit.edu.

## Course Policies

The only team-developed part of work happens in the team problem-solving session (PSS). All other Lab and Homework assignments must be the result of individual effort, not teamwork. Development of code for Labs, Homeworks, or other graded work is an individual responsibility.

Submitting individual work written by others or as an unsanctioned team is considered an act of academic dishonesty. In cases where a student or team is suspected of cheating or copying material, the instructor shall notify the students involved and act in accordance with RIT's Academic Honesty Policy, as well as the sections of this syllabus related to grades, cheating, and academic integrity.

Although students may discuss assignments with others, all individually submitted writings and code must be created independently by the student and not copied from others or other sources (e.g. web pages).

Team-developed work also must be created solely by the team members and not copied from others or other sources unless with prior instructor approval.

### Assignment Submission Deadlines and Makeups

Published deadlines are firm, and *there are no makeups on assignments that you do not submit.* You may not submit work after than the standard "late submission" deadline and expect to get any credit. Requests to submit an assignment late *without prior approval before the deadine* will be denied.

Instructors will allow *extra late submissions* only in extreme situations for which there is formal documentation of the reason (e.g. an accident report). Forgetting, oversleeping, car problems, and similar excuses are not valid reasons that justify an extra late submission.

## Materials

Please see the resources page, http://www.cs.rit.edu/%7Ecsci141/resources.html for details of tutorials, references, textbooks and other resources.

## Grading

Letter grades are based on the following scale.

| Letter | Percentage Range |
|---|---|
| A | 92% or above |
| A- | at least 89% but under 92% |
| B+ | at least 85% but under 89% |
| B | at least 82% but under 85% |
| B- | at least 79% but under 82% |
| C+ | at least 75% but under 79% |
| C | at least 72% but under 75% |
| C- | at least 69% but under 72% |
| D | at least 60% but under 69% |
| F | under 60% |

| Component | Elements | Weight | Notes |
|---|---|---|---|
| Assignments Component (50%) | | | Deadlines are in the Assignments area of MyCourses, the location of assignment dropboxes. |
| | Homeworks | 15% | These assignments are completed independently, outside of class |

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|---|---|---|---|
| | | | time. |
| | Labs | 20% | These assignments start with an in-person, team-based problem-solving session, and finish independently, outside of class time. Attendance is required. |
| | Project | 10% | The multi-week project assignment is completed independently, outside of class time. |
| | Recitation | 5% | Recitation attendance is required. |
| Tests Component (50%) | | | |
| | Recitation | 5% | Recitation quizzes. |
| | First Midterm Exam | 10% | 1 hour 50 minute, written test is in the lecture room. |
| | Practical Exam | 5% | 50 minute programming test is in the lab. |
| | Second Midterm Exam | 15% | 1 hour 50 minute, written test is in the lecture room. |
| | Final Exam | 15% | 2 hour, comprehensive, written exam is during the Final Exam week. |

## The Course Grade Limit Rule

**Note: Your whole course grade may only be at most 10% more than the average grade of the elements of your worse Assignments Component or Tests Component.**

As a matter of practice, this limit comes into play when the difference between your Assignments and Tests averages is more than about 20%. It has been the experience of the department that a student whose grade difference is this great is having more difficulty than meets the eye with regard to understanding and mastering the material.

Here is an example. Let's say you got a **70%** average on the Tests Component elements and a **94%** average on the Assignments Component elements. In this case, your course grade would be limited to **80%** (a *B*-), which is 10% above your Tests Component grade. Without the grade limit rule, your course grade would have been 70 * 0.5 + 94 * 0.5 = 82%, which is a **B**.

**Warning: The MyCourses application is incapable of applying this grade limit rule. Therefore students should manually compute it because they will not be able to see it.**

## Grade Appeals

A grade becomes permanent one week after you receive the grade. *Grade appeals and questions must be raised to your instructor and Student Lab Instructor (SLI) in writing(email) within one week after the day on which the grade was received*.

## Grades in MyCourses

Your grades appear in MyCourses as the assignments are graded by your SLI. Lab grades should appear about 2 weeks after the assignment due date. If your grades do not appear regularly, notify your instructor of the issue so that they can address it.

*Note:* As soon as one graded item appears in MyCourses, the MyCourses tool treats the graded item as 'completed', and it does not take future assignments into consideration. For example, if you got an F on the first homework, MyCourses treats that as the final, complete grade for all the homeworks of the course until the second homework is entered. The end result is that MyCourses' estimation of a possible maximum future grade is incorrect. You will need to conduct your own 'what if' calculations to determine your maximum future grade.

### Grading Evaluation and Feedback

For homeworks and lab work, you should expect to receive your grade and comments within 2 weeks of the late submission deadline.

For projects and exams, you should expect to receive your grade within 3 weeks of the late submission deadline, since these take longer to grade.

### Grades and Cheating

While cheating policies are detailed elsewhere in this syllabus, a summary process is important to understand. Upon detection of cheating or copying material, the instructor will send an email to the student to schedule a meeting with the student(s) involved to discuss it; this may involve more than one instructor. One of the following results may occur:

1. 0% assignment grade for a minor first offense. This is informally noted in case a second offense occurs.
2. 0% assignment grade and note in your permanent record for a major offense (e.g. blatant, complete copy of other work).
3. 0% course grade and note in your record for a second offense.
4. 0% course grade and escalation for subsequent offenses.

Note that the more severe the offense, the higher it escalates in the institute. See the cheating and academic policy links elsewhere in this syllabus.

## Course Format

This course meets for five hours each week: two hours of lecture, two hours of lab, and one hour of recitation.

### Lecture

The first class of the week is usually a lecture with your lecture instructor. It is held in a classroom with all students in the section.

During the first class your lecture instructor assigns everyone in the class to one of two groups (A and B) for the entire term. Group A continues the week with a lab session on the second day of class, followed on the last day of the week by a recitation. Group B continues the week with a recitation on the second day of class, followed on the last day of the week by a lab session. *After the middle of the term, groups A and B switch their meeting days for lab and recitation*. (See logistics.html.)

### Labs

Labs meet for two hours each week and usually consist of a problem-solving session (PSS) followed by an in-lab session called the *postPSS*. After the sessions end, the student completes the lab independently and uploads their work to MyCourses.

The following describes a typical week's lab. The labs have these components:

- problem-solving session team activities
- postPSS, in-lab individual activities
- out-of-lab individual implementation and submission (final work)

The first lab hour meets in a classroom or a lab where students participate in a team problem-solving session (PSS) using pen and paper or whiteboards to develop algorithms and code for a particular problem. The lecture instructor leads the team problem-solving session with the assistance of Student Lab Instructors (SLIs).

Please note that *the lab material is not posted online*. It is your responsibility to attend every lab on time to obtain the assignment and participate in team-based problem-solving. (See logistics.html for further description.)

*Failure to attend a PSS and/or its postPSS, in-lab session will result in loss of all credit for each missed portion of the lab*.

Instructors collect and evaluate the team problem-solving work at the end of the problem-solving session.

The second hour takes place in the interactive computer lab (ICL) rooms where *students individually implement the algorithms* from the problem-solving session. An SLI leads the postPSS in-lab session in each lab room and grades those students' lab assignments.

The SLI also grades the lab's postPSS work, which the student uploads to a MyCourses dropbox. *PostPSS work is due at 11:59 PM on the Sunday before the Lab due date.*

The programming implementation portion of the Lab must be submitted electronically online. It is your responsibility to submit all work on time.

Lab assignments are due during the week following the lab session. *Labs are due at 11:59 PM on either a Tuesday or Wednesday*, depending on the semester; MyCourses has the actual deadlines.

Your lab grade is computed using the scaled sum of all the individual lab assignments: PSS, postPSS, and implementation.

*There are no makeups on Labs that you do not submit.* However, you can upload a "late submission" up to eight hours after the deadline and be subject to a late penalty.

The lab **late penalty is an 80% ceiling** or *cap* applied only to the implementation grade; the scores for the problem-solving and in-lab are unaffected. An implementation score that would have been higher than the ceiling is **capped at the ceiling percentage**. If the implementation is 75% of the total lab grade, then the implementation late 80% ceiling caps the grade at 60%. A late implementation score lower than the cap is not touched, and there is no penalty; a late implementation score higher than the cap will be capped at 60%.

## Recitation

**Recitation attendance is required** for all students, and meets for *one scheduled hour*, which could be different depending on the course section and schedule. *Check with your instructor to learn whether the recitation meets during the first scheduled hour, the second scheduled hour, or something special.*

A graduate Teaching Assistant (TA) leads the recitation, which is designed to provide practice and to reinforce the student's understanding of the material covered in lecture. The TA provides a quiz and exercises for practice, and reviews and expands upon the lecture materials, and answers questions related to the course.

The TA records attendance information and quiz/practice results and enters them into MyCourses.

## Homeworks

Homework for the week is posted through a link on the course website. Homework questions are completed individually and may include a combination of programming problems and written questions.

*Each homework is due Friday night before midnight, at 11:59 PM* of the week in which the homework was assigned. (This is technically very early Saturday morning.) Your homework grade for the course is computed using the scaled sum of all homework assignments. There are no makeups on homeworks that you do not submit, but you can do a "late submission" up to two hours after the deadline subject to a late penalty. An unsubmitted homework receives a 0 grade.

The homework late penalty is an **80% ceiling** or *cap*. A score that would have been higher than the ceiling is **capped at the ceiling percentage**. A score that is lower than the ceiling is not touched, and there is no penalty.

The homework must be submitted electronically online. It is your responsibility to make sure that you submit all your work on time within the deadline.

## Project

The course term will appear through a link on the course website. The project is designed to be longer than lab assignments and requires multiple weeks to complete properly. The project must be completed individually, outside of class time.

## Exams

The course has these exams: two written Midterm Exams, one Practical Exam, and one Final Exam. The **Midterm Exams** are written tests, and the **Practical Exam** is an in-person, individually-completed, timed problem-solving exam. The **Final Exam** is a comprehensive, written test. During exam weeks there may be a lecture on a topic not on the exam. Instead of lab sessions, there is a 2 hour, written test period and possibly a 1 hour, Practical examination period or a Recitation review period.

The **Practical Examination** is a 50 minute, timed test of design, implementation and testing skills. The practical examination takes place in a computing lab. The first group takes the practical during the first half of the class time period, and the second group takes it for the second half of the class time period. See your instructor for the details of the exam week schedule. Because of room conflicts, different sections are scheduled differently during exam weeks.

A comprehensive, common Final Exam is given to all sections at the same time during the regularly scheduled Final Exam period. The date of the Final Exam is announced early in the term. You must take the Final Exam at the time scheduled for your section. *Finals are not given early, and there is no makeup exam*. The Final is comprehensive and covers material from the entire course.

### Exam Rescheduling

Instructors will reschedule exams only in difficult situations for which there is formal documentation for the situation (e.g. a hospital record) and *when the instructor is notified in advance*. Sleeping through the exam, car problems, and similar excuses are not valid reasons for missing an examination and requesting a make-up exam.

### Final Exam Conflicts

RIT has several policies on rescheduling to handle Final Exam conflicts.

A student must submit a written request for Final Exam rescheduling to the head of their *home department*, with a copy of the request given to the instructor(s) affected by the request to provide a rescheduled Final Exam. **Students must first discuss their Final Exam situation with all of their instructors.**

Of special relevance are these cases of exam conflicts:

1. A student is scheduled for two Final Exams at the same day and time.
   The rules that determine which Final Exam takes precedence involve the conflicting exam subject and the student's *home department*. The student must work with both instructors and the home department to resolve the conflict.
2. A student is scheduled for three or more Final Exams on the same day.
   In this case, a student may choose not to take three or more Final Exams in one day. The student must work with both instructors and the home department to resolve the conflict.

## Wellness

Success in this course depends heavily on your personal health and well-being. Stress is an expected part of the college experience, and unexpected social and personal setbacks can compound this. The instructor team encourages you to view these challenges as an unavoidable path to success.

Understand that you need to take care of yourself and communicate problems before demands of assignments reach a peak. *Please feel free to reach out to us about any difficulty that may affect your performance as soon as it occurs and before it is unmanageable.* In addition to your academic advisor, you also should make use of the multiple other support services on campus that are available to you.

## Getting Help

Students may obtain help from the following sources:

- Your lecture instructor, who has posted office hours (or by appointment);
- Student Lab Instructors (SLI), who assist with labs;
- Teaching Assistants, who conduct weekly recitation sessions;
- The GCCIS Tutoring Center on the second floor, where student lab assistants on staff provide help with assignments. (Be sure to ask for CS assistance. SLIs will help only with technical

questions about the programming language and environment; they will not help you design or write your program.)
- The Tigers Care, for more general help;
- The Computer Science Community (CSC), student group that conducts activities oriented to CS majors and others interested in computing.

## Course Withdrawal

RIT policy allows you to withdraw from a course with a grade of **W** on or before the Friday of the 12th week of the term. After this date, your instructor cannot give you a **W**; they must assign a grade based on your work. Incomplete grades are given only in exceptional circumstances, and only when arrangements have been made with the lecture instructor *before the end of the term*.

## Academic Integrity and Academic Dishonesty

RIT's Academic Honesty Policy defines the basic forms of academic dishonesty (cheating, duplicate submission, and plagiarism) and explains the official RIT policy regarding academic dishonesty.

The only part of team-developed work happens in the joint problem-solving session. All other assignments must be the result of individual effort, not teamwork or collaboration. Development of code for Labs, Homeworks, and other graded work is an individual responsibility.

Submitting individual work written by others or as an unsanctioned team is considered an act of academic dishonesty. In cases where a student is suspected of cheating or copying material, the instructor shall notify the students involved and act in accordance with http://www.rit.edu/academicaffairs/policiesmanual/d080.

Although students may discuss assignments with others, all individually submitted writings and code must be created independently by the student and not copied from others or other sources (e.g. web pages).

Note that academic integrity includes the understanding that **no student will post their code in publicly accessible locations (repositories or web sites).** If an assignment does not specify a location for version control, you may store your work only on your personal computers or on **private, password-protected, unsearchable on-line storage facilities**. Hard copies, if created, must be kept secure.

Team-developed work also must be created solely by the team members and not copied from others or other sources unless with prior instructor approval.

## Other Policies

Other RIT policies may be found at the provost's governance library, http://www.rit.edu/academicaffairs/policiesmanual/policies/governance.

The RIT policy on harassment is covered in http://www.rit.edu/academicaffairs/policiesmanual/c060.

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