



The University of Texas at Austin
Computer Science
College of Natural Sciences

Fall 2026

CS 109: What is Computer Science?

Understanding the Big Picture

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What do you think it is?

What do you think it is not?



What is it?

Theoretical Computer Science

Systems and Networking

Graphics

Artificial Intelligence

Robotics

Computer Architecture

Software Engineering

Scientific Computing

Computational Biology

Game Development

Machine Learning

Quantum Computing

Computer Vision

Data Management

Computational Neuroscience

Natural Language Processing

Virtual and Augmented Reality

Information Retrieval

Parallel and Distributed Computing

Human Computer Interaction

Programming Languages and Compilers

Security and Privacy

Formal Methods



So much to learn.
Where do you begin?



How UTCS Supports Your Learning

CS Core:

- 2 programming
- 2 systems
- 2 theory

CS Electives:

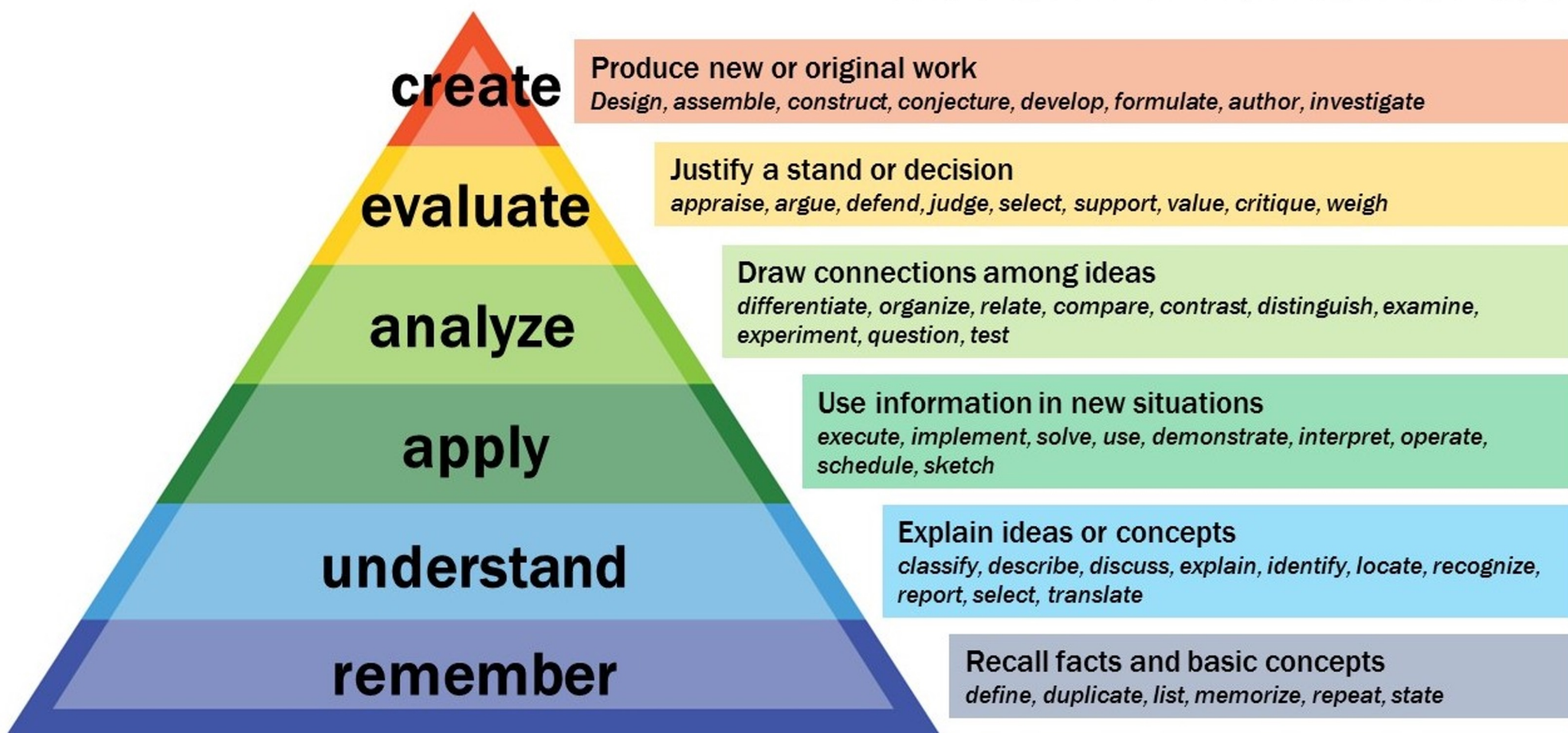
- BS chooses 8
- Interdisciplinary degrees vary: all have at least 4, but some may be prescribed
 - Including BSA, X+CS, CSB

Also:

- UT Core
- Math
- Science
- Foreign Language and Culture
 - most of you



Bloom's Taxonomy





A Closer Look at the CS Core

- Programming
 - CS312: Introduction to Programming
 - CS314: Data Structures
- Systems
 - CS429: Computer Organization and Architecture
 - CS439: Principles of Computer Systems
- Theory
 - CS311: Discrete Mathematics for Computer Science
 - CS331: Algorithms and Complexity



What does learning look like?



Edsger W. Dijkstra (1930–2002)



Famous Computer Scientist

- Authored more than 7000 pages of technical essays and research papers
- Invented algorithm, operating systems techniques, designed multiprogramming systems
- Won Turing Award in 1972
- UT Austin Computer Science professor in 1984-2002



UTCS: What Learning Looks Like

“Computer Science is no more about computers than astronomy is about telescopes”

— Edsger W. Dijkstra



UTCS: What Learning Looks Like

“Your obligation is that of active participation. You should not act as knowledge-absorbing sponges, but as whetstones on which we can all sharpen our wits”

— Edsger W. Dijkstra



UTCS: What Learning Looks Like

“The computing scientist’s main challenge is not to get confused by the complexities of his own making.”

— Edsger W. Dijkstra

“Simplicity is a great virtue but it requires hard work to achieve it and education to appreciate it. And to make matters worse: complexity sells better.”

— Edsger W. Dijkstra



UTCS: What Learning Looks Like

“Program testing can be used to show the presence of bugs, but never to show their absence!”

— Edsger W. Dijkstra



What does successful learning look like?



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WHAT STARTS HERE CHANGES THE WORLD

Be curious.



Learning New Things

Concentrations

Certificates/Minors

X+CS



It will not be easy.



Growth Mindset

Mental effort changes the brain and increases capacity.



Maintain Your Integrity.

It's the most important thing.



Academic Integrity

Taken very seriously in UTCS.

With great power comes great responsibility.



Keeping Your Integrity

Definition is course dependent

Check the syllabus for parameters

Help from colleagues, code on web, Stack
Overflow, LLMs, GitHub coPilot, CourseHero,
Chegg, Craig's List

You need to know the collaboration/cheating
boundary



Actions Have Consequences

1st time:

- Course Level: 0 on the assignment, reduced letter grade, failing the course
- Community Level: ethics training, other possibilities
- Academic probation
- Grad schools may inquire and learn about the infraction

2nd time:

- 1st time consequences + suspension from the university

3rd time:

- 1st time consequences + expulsion from the university



But y'all...

We're here to learn and have fun!

So let's do that.



CS is Everywhere

Every company is a tech company



Career Fairs!

UT Austin [Career Fair Calendar](#)

[CNS Technology and Science Career Fair](#) is next week.

- Consider walking around to understand what it is all about
- Tuesday, September 15th, 12p-4p
- Class may be more important

Also coming next week: National Security, McCombs, Geosciences.

You do need to register for all of these.

There will be more in the spring, where you will have more experience and thus be more hireable.



Speak the Language

ACM has a list of [common terms and acronyms](#) you will hear.



Coming Up

Assignments due:

Reflection on CS assignment 9/13

Introduction to the Lab assignment 9/13

Student Org assignment 10/4

Next week: Attend discussion section!



Exit Instructions

Large double doors:

Wednesday PM

Door on right of stage:

Wednesday Morning

Door on left of stage:

Everyone else



r/vibecoding 
u/AssafMalkilL · 8h

Join

What's the point of vibe coding if I still have to pay a dev to fix it?

what's the point of vibe coding if at the end of the day i still gotta pay a dev to look at the code anyway. sure it feels kinda cool while i'm typing, like i'm in some flow state or whatever, but when stuff breaks it's just dead weight. i cant vibe my way through debugging, i cant ship anything that actually matters, and then i'm back to square one pulling out my wallet for someone who actually knows what they're doing. makes me think vibe coding is just roleplay for guys who want to feel like hackers without doing the hard part. am i missing something here or is it really just useless once you step outside the fantasy

↑ 109



💬 95

