Introduction to Computer Science with Robotics Labs

About the Course and Syllabus



Dr. Yinong Chen Arizona State University

IoT & Robotics Education Laboratory

Day One Itinerary

- About the instructor
- Syllabus discussion
- Course objectives & outcomes
- Formats of lectures and labs
- Class and lab rules
- Code of Student Conducts

Yinong Chen (陈以农)

Before joining ASU

□ Taught for six years

Department of Computer Science

Wits University of Johannesburg, South Africa

- Postdoc at LAAS-CNRS, Toulouse, France
- Ph.D. from University of Karlsruhe (KIT), Germany
- Contact and more ... http://www.public.asu.edu/~ychen10/

Heinrich Hertz worked at KIT from 1885 to 1888, where he discovered electromagnetic waves



Web In Yinong Chen 陈以农 Yinong Chen

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Instructor: Yinong Chen

Joined ASU CSE in 2001

Courses Taught at ASU

CSE 101/FSE100 (Introduction to Engineering): Every semester from Fall 06 to Fall 11, Spring 16, Fall 16, Spring 17

CSE230 F11, F12, S13, F13, F14

CSE 240: Almost every semester since Fall 2001

CSE 310: SS01, F01, SS02

CSE 225/EEE225: F02, S03, F03, S04, CSE 330: S2002, SS 2003 CSE 420/598: S01

CSE 423 (Capstone) S08, F09

CSE 445/598: (Distributed Software Development) Almost every semester since 2006

CSE 446/598 (Software Integration & Eng): SS10, SS11, Sp11, SS12, SS13, Sp14, Sp16, Sp07

Yinong Chen

- More than 10 books
- 200 research papers, 100
 of which are after 2005 in
 service-oriented computing
- Editor of international journals
- Chair of international conferences
- Keynote, panel talks
- Teach high school students to program robots

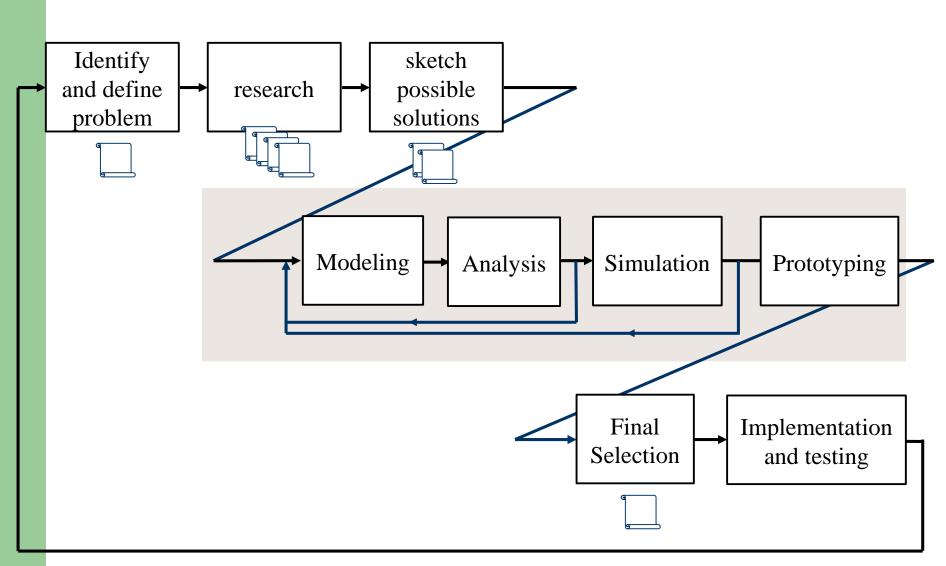


Syllabus Discussion

Catalog Description

- Introduction to topics in Computer Science and Computer Engineering;
- Familiarization with contents of CS and CE curriculum sub-disciplines and topics;
- Design of computer software and systems;
- Computer models and programming;
- Exploring and experimenting with systems;
- Learning about teaming;
- Professional opportunities;
- Communication skills;
- Lecture and Lab.

Engineering Design Process



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Course Outcomes

- Learn the engineering design process
- Gain related concepts and knowledge
- Apply the concepts and exercise the engineering design process,
 - Define problem, design a solution
 - Modelling and analysis
 - Program the robot using computational thinking
 - Simulation and physical robot programming
- We will also learn hard skills and soft skills
 - Hard Skills: Basic programming skill, understanding computer systems, and using tools.
 - Soft Skills: Teamwork, writing report, giving presentation

Participation



- Participation of all students is required in each lecture and lab session. If work for other classes is being done in the lab, the student will receive a grade of zero for the lab.
- If discussion in a lab group does not pertain to the lab session, the participating students may be asked to leave and no makeup will be allowed.

General Rules and Common Courtesy

- Silent your cellular phone; If your phone happens to ring, stop it immediately and do not answer the call!
- Use computer for directly related activities only, e.g., taking notes.
- Do not talk to each other during the lecture. If you have a question that needs to be addressed immediately, you must ask the instructor.
- Enter the classroom before the lecture's starting time.
- Do not leave the classroom during the lecture, unless there is an emergency situation.

Cooperation and Code of Conduct

- You are required to cooperate with your team member on the group assignments and projects.
- The contribution and possibly the weight of individual team members must be acknowledged/specified in the work handed in for grades.
- Anything you turn in must be your (or team's) own work: You must write up your own solution with your own understanding. If you use an idea that is found in a book or other sources, or that was developed by someone outside your team, make sure you acknowledge the source and/or the names of the persons in the write-up for each problem.
- You are also encouraged to work with any member in the team or in the class to study for the tests and exams.
- The instructor and the TAs will CAREFULLY check any possible proliferation or plagiarism. We may also use the software tools like MOSS (Measure Of Software Similarity) to check any assignment that you submitted for grading. The university expects all students to adhere to ASU's policy on academic integrity.
- ALL cases of cheating or plagiarism will be handed to the Dean's office. Penalties include a failing grade in the class, a note on your official transcript that shows you were punished for cheating.

Team Building



Team Forming

- Find teammates that could accommodate with your schedule.
- Go search around, don't limit yourself to only your friends. Get to know people...
- If you do not send me your team, we will choose for you and you cannot complain!
- Each team should be four members, and three member team are allowed with permission.

" 'Ten' Commandments" -- An Affective Code of Cooperation

- 1. Help each other be right, not wrong.
- 2. Look for ways to make new ideas work, not for reasons they won't.
- 3. If in doubt, check it out! Don't make negative assumptions about each other.
- 4. Help each other win, and take pride in each other's victories.
- 5. Speak positively about each other and about your team at every opportunity.
- 6. Maintain a positive mental attitude no matter what the circumstances.
- 7. Act with initiative and courage, as if it all depends on you.
- 8. Do everything with enthusiasm; it is contagious.
- 9. Whatever you want; give it away.
- 10. Don't lose faith.
- 11. Have fun!