Gebze Institute of Technology
Department of Computer Engineering

CSE 463/665

Computer Vision
Fall 2015
Syllabus

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Current and other useful information (homework, announcements) about this course will be kept on the Moodle page.

http://bilmuh.gyte.edu.tr/moodle/

Textbook

- Computer Vision: Algorithms and Applications, Springer; 1st Edition. edition (November 24, 2010), Richard Szeliski, The book drafts are available at http://szeliski.org/Book/
- Introductory Techniques for 3-D Computer Vision, Trucco and Verri
- “Machine Vision” by Ramesh Jain, Rangachar Kasturi, Brian G. Schunck

Course Prerequisites

- Some calculus and linear algebra knowledge is required.
- Fluency in C and C++ programming language is required. CSE 241
- If you do not satisfy these conditions, please talk to the instructor.

Grading

The course grade will be determined approximately as follows:

- Midterm: 25%
- Final: 35%
- Homeworks: graduate-30% undergrad 40%
- Paper implementation and presentation (Graduate students only): 10%

Grading and Homeworks

- If you submit less than 70% of the homeworks, then you will get a grade of NA from this class.
- Homeworks are due by 23:59 on the due date.
- 10% of the maximum grade will be deducted for each day late.
- We will not accept homeworks submitted more than 10 days late
- If there is a situation which prohibits you from turning in your homework on time, talk to me before the due date.

Exams

Tentative 90%

- Midterm Exam Nov 2nd 2015 during class
- Final Exam Second week of finals period

Attendance

- Attendance is required and attendance will be taken regularly.
- You are responsible from all the subjects covered in the class.
- You will get a grade of NA if you miss more than 30% of the classes. Unless
  - You work officially
  - There is a class conflict

Homework Submission and Announcements

- All the class related announcements will be made either in class or by the class moodle page.
- Students are required to read their emails regularly and check the moodle page.
- The homeworks will be announced at the moodle page
- The homeworks will be submitted at he moodle page

OpenCV

- The class work will be done using the OpenCV library.
- Please download and install OpenCv at http://sourceforge.net/projects/opencvlibrary/ .
- Compile and play with the sample applications.

Honor Code

- You should not misrepresent someone else's work as your own.
- Do not use work from someone else.
- All cases of confirmed cheating will be reported for disciplinary action.

Topics to Be Covered

1. An Introduction to Computer Vision
2. Cameras
3. Image processing
4. Linear Filters and Edge Detection
5. Segmentation by Clustering
6. Stereo
7. Motion
8. Recognition