



EE P 596: Machine Vision

Autumn 2019

Tuesday, 6pm-9:50pm, CSE2 G020

Instructor: [Linda Shapiro](#)

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Office Hours: after class or by request

TAs:

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Discussion Board: [link](#)

Course Details

- **Purpose:** To introduce Machine Vision to EE PMP students, both the basic topics and some state-of-the-art algorithms.
- **Text:** Shapiro and Stockman, Computer Vision Prentice-Hall, 2001. Original Chapters available at [this URL](#).

Programming Experience: The assignments in this class require programming ability. We plan to use C++ this time. I would like all prospective students to send me an email (before classes start if possible) listing their programming experience, what languages, how much expertise in each. This is so that the TAs and I can better plan the assignments. Send to shapiro@cs.washington.edu.

- **Tentative Topics:**

- Filters; Binary Machine Vision
- Edges and Lines; Transformations
- Color and Texture
- Region Segmentation
- Interest Operators and Descriptors
- Image Stitching
- Entropy Operator and Recognition by Parts
- Content-Based Image Retrieval
- Machine Learning
- Object Recognition Using Machine Learning
- Face Detection and Recognition
- Motion/Optical Flow
- 3D

- [Notes](#)

- [Assignments](#)

- **Evaluation:** The grade will be based on a weighted combinations of the programming projects.

Late Homework Policy

Each assignment will have a regular due date and a late due date. Late homework will be accepted up until the late deadline, but with 10% off per day. For example, if the late deadline is 2 days past the regular due date and you hand in the assignment one day late, you lose 10% and if two days late, you lose 20%. Each student gets one "free" late day for the whole quarter.

Student Conduct Code

The [Student Conduct Code](#) explains that admission to the University carries with it the presumption that students will practice high standards of professional honesty and integrity (WAC 478-120-020 [2]). In particular, all work (homework and exams) is to be **your own individual work**. You may discuss programs but NOT copy any code. You may not discuss exams.

Disability Accommodations

[UW Page](#)

Religious Accommodations

[UW Policy](#)