BE244 Winter Quarter Biomedical Image Analysis

January 5, 2009 – March 18, 2009 (11 weeks)

Time:	Mondays and Wednesdays from 11:00 am – 12:30 pm
Location:	China Basin Classroom (Room 331)
Instructors:	Colin Studholme (colin.studholme@ucsf.edu)
	Kio Kim (kio.kim@ucsf.edu)
	Piotr Habas (piotr.habas@ucsf.edu)
	Catherine Klifa (catherine.klifa@radiology.ucsf.edu)

2009 Syllabus

M Jan 5+7	Introduction to Instructors and Course Topics
M Jan 12	Digital Imaging Basics (Kim)
W Jan 14	Digital Imaging Basics (Kim)
M Jan 19	Martin Luther King birthday – HOLIDAY
W Jan 21	Image Enhancement I – Spatial Domain (Studholme/Habas)
M Jan 26	Image Enhancement II – Frequency Domain (Studholme/Habas)
W Jan 28	Image Restoration (Habas)
M Feb 2	Spatial Filtering (Klifa)
W Feb 4	Image Segmentation (Klifa)
M Feb 9	Texture (Klifa)
W Feb 11	Morphology (Klifa)
M Feb 16	President's day – HOLIDAY
W Feb 18	Object Representation in Medical Images (Studholme)
M Feb 23	Object Descriptors for Medical Image Analysis (Studholme)
W Feb 25	Object Classification I- Linear Discriminant (Studholme)
M Mar 2	Object Classification II- High Dimensional Classification (Studholme)
W Mar 4	Object Classification III- Neural Networks (Studholme)
M Mar 9	Template Matching and Intro to Image Registration (Studholme)
W Mar 11	Image Analysis Project due (Studholme)
M Mar 16	Discussion Session
W Mar 18	Final Exam (date is negotiable)

Method of Evaluation

Homeworks – 50%
Projects (3) – 30%
Final Exam – 20%

Textbook

Digital Image Processing 2nd Edition
R.C. Gonzalez and R.E. Woods, Addison Wesley 2002