

SYLLABUS
BIL464 – MULTIMEDIA SYSTEMS
2014–2015 Fall

Course Description

The main objective of this course is to provide students with an in-depth understanding of the multimedia data representations, processing, compression, and coding standards. Programming assignments will be given in Matlab/.NET/Java through the course. Students achieving this course are supposed to have minimum knowledge in design and application of multimedia systems, storage and presentation issues.

Contact	Schedule	Grading
Instructor: Asst.Prof.Dr. Mustafa SERT Office: D-415 Phone: +90-312-246-6660 Ext.1236 E-mail: msert@baskent.edu.tr Web: www.baskent.edu.tr/~msert/ Assistant: S. Ezgi Yalniz	Class Hours: Mon. 11:00–12:50, Thu. 13:00–14:50 Location: B-308 Office Hours: Wed. 15:00–16:50 By Appointment or e-mail	Assignments: 15% Quizzes: 15% Active Part.: 5% MT Exam: 25% FN Exam: 40%

Textbook: Jennifer Burg, “The Science of Digital Media”, Prentice Hall, (2009).

Reference(s):

1. Ze-Nian Li and Mark S. Drew, “Fundamentals of Multimedia”, Prentice Hall, (2004).
2. Nigel Chapman and Jenny Chapman, “Digital Multimedia”, Wiley, (2000).
3. Tay Vaughan, “Multimedia: Making it Work”, McGraw Hill, (2003).
4. Guojun Lu, “Multimedia Database Management Systems”, Artech House, (1999).

Table 1: Weekly Course Schedule

W	Topics	Resources
1	Course Introduction, Digital Technology	LNs, Chapt.1
2	Textual Data Representation	LNs
3	Digital Image Representation (<i>No lecture on October 6, 2014 – Bayram</i>)	Chapt.2
4	Color Models	LNs
5	Basic Image Processing Techniques	Chapt.3
6	Digital Audio Representation	Chapt.4-5
7	Time & frequency analysis of audio signals.	Chapt. 4-5
8	<i>Midterm Exam Week. Subject to change according to Faculty regulations</i>	
9	Video Types and Representation	Chapt. 6
10	Lossless Compression Algorithms	Chapt. 1.5
11	Lossless Compression Algorithms	Chapt. 3.10
12	Lossy Compression Methods	Chapt. 3.10
13	JPEG - Image compression standard	Chapt. 3.10
14	Storage support of DBMSs for multimedia data	LNs
15	Course Summary and Review (<i>Semester ends on Wednesday</i>)	LNs

*The instructor can change the content of this schedule plus other information anytime without any prior notice.