

# CS4624 Outline

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- Pre-Test
- IN: Introduction (1.5 wks), Labs:
  - Course Notes: 0, 1, Exercises, Labs: 1, 2, 3, Objectives, Study Questions
  - Issues: Predictions, roles of publishers & electronic publishing, applications (e.g., multimedia mail, training, video on demand), hypertext/hypermedia
  - Readings - textbook chapter: 1 ; WWW: MOO Information
  - Systems/Demonstrations: Author/Editor, KMS, MIME, Mosaic, Storyspace
- AC: Application Construction (2.5 wks)
  - Course Notes: 2, Exercises, Objectives, Study Questions
  - Issues: architectures / reference models (e.g., IMA), toolkits, authoring systems
  - Readings - textbook chapters: 3, 12; WWW: Virtual Reality
  - Systems/Demonstrations: AuthorWare, Director, ENVISION, Virtual Reality
- CR: Capture and Representation (3.5 wks)
  - Course Notes: 3, 4, 5, Exercises, Labs: 4, Objectives
  - Issues: Universe of objects, human visual system, psychoacoustic modeling, digitization, quantization, conversion, metadata, cataloging, representing media (text, images, video, audio), CD-ROM
  - Readings - textbook chapters: 4, 5, 11, 14; WWW: CD-Video Extra Articles in CACM: Jan. 1994 CACM (Special Issue on Hypermedia), Dec. 1991 CACM article on HyTime (Newcomb et al.), April 1991 CACM (Special Issue on Digital Multimedia Systems) on JPEG (Wallace), MPEG (Le Gall), MPEG compression for CD-I (Sijstermans and van der Meer), px64 (Liou), MIME (Borenstein), and DVI Chips (Harney et al.)
  - Systems/Demonstrations/Exercises: scanning, Illustrator,

Photoshop, OCR, Photo-CD

- MC: Models and Compression (3 wks)
  - Course Notes: 6, Exercises, Labs: 5, Objectives, Study Questions
  - *Issues*: Hypertext models (e.g., Dexter, Trellis, Amsterdam), standards (e.g., SGML, HyTime, MHEG, JPEG, MPEG), object classes, time, document models, vector quantization, DCT, entropy coding
  - *Readings - textbook chapters*: 6, 7; Hyperbases: ACM Hypertext on Hypertext, Hypertext Compendium- esp. Dexter, Trellis; book: QuickTime; page images - esp. Amsterdam, IRIS project, Multimedia
  - *Systems/Demonstrations/Exercises*: MPEG-player, DVI, QuickTime
- PI: Presentation and Interaction (2 wks)
  - Course Notes: 7, Exercises, Objectives, Study Questions
  - *Issues*: rendering, browsing, navigation, searching & search engines, link services & engines, standards (e.g., PREMO), scripting
  - *Readings - textbook chapters*: 10; WWW: Hyper-G, ILD LCS, OpenDoc (and Bento), QuickTime, ScriptX
  - *Systems/Demonstrations/Exercises*: ENVISION, HyperCard/Toolbook, Hyper-G, HyperTies, MARIAN, MHEG, ScriptX, WAIS
- NC: Networking and Communication (1.5 wks)
  - Course Notes: 8, Exercises, Labs: 6, Objectives, Study Questions
  - *Issues*: distributed hypermedia databases, store & forward, Internet services, synchronization, quality of service, protocols, video conferencing, objects with their methods, multimedia servers
  - *Readings - textbook chapters*: 9, 15; book: Hodges+ Ch 20; WWW: Information on Videoconferencing
  - *Systems/Demonstrations/Exercises*: CU-SeeMe, MBone
- Post-Test and Review
- Quizes and Final

# Special Events and Field Trips

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