

Course Outline and Structure

Chapters of the text *not* covered in class: {2, 4, 7, 8, 9, 10, 18, 19, 21}

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| Week 1:
Overview: field of Computer Graphics.
Models of space, complex objects.
Curriculum planning. | Text: Ch 1 |
| Week 2:
CG math: vector spaces, matrices, quaterions
2D raster graphics
Assignmnet 1: math practice | Text: Appendix |
| Week 3:
Geometric transformations, coordinate systems
Assignment 2: coordinate transformations | Text: Ch. 3, 5 |
| Week 4:
Viewing in 2D and 3D, visual realism | Text: Ch 6, 14 |
| Week 5:
Solid modeling
Assignment 3: modeling | Text: Ch 12 |
| Week 6:
Visible surfaces
Assignment 4: realism | Text: Ch. 15 |
| Week 7:
Curves and Surfaces | Text: Chs 11 |
| Week 8:
Lighting, illumination
Assignment 5: color and light | Text: Chs. 13, 16 |
| Week 9:
Advanced modeling (fractals, particle systems, constraint systems)
Assignment 6: modeling techniques | Text: Ch 20 |
| Week 10:
Image manipulation, closure. | Text: Ch. 17 |