

**Lectures:**

- [Lecture 00 - Course Information](#)
- [Lecture 01 - Introduction to Computer Graphics](#)
- [Lecture 02 - Graphics Pipeline](#)
- [Lecture 03 - 2D and 3D Transformations](#)
- [Lecture 04 - 3D Projection and Visualization](#)
- [Lecture 05 - Shaders](#)
- [Lecture 06 - Light](#)
- [Lecture 07 - Shadows](#)
- [Lecture 08 - Global Illumination](#)
- [Lecture 09 - Textures and Materials](#)
- [Lecture 10 - Particle Systems](#)
- [Lecture 11 - Procedural Geometry](#)

**Program:**

- Concepts of Computer Graphics;
- Graphics Hardware and Pipeline;
- 2D and 3D Transformations;
- Projections and 3D Visualization;
- Shaders;
- Direct Illumination;
- Shadowing;
- Real Time and Pre-calculated Global Illumination;

- Textures and Materials;
- Particle Systems;
- Procedural Geometry.

**References:**

Hughes, J. F., et al. (2013). Computer Graphics: Principles and Practice (3rd ed.). Upper Saddle River, NJ: Addison-Wesley Professional. ISBN: 978-0-321-39952-6.

Marschner, S., et al. (2015). Fundamentals of Computer Graphics (4th ed.). A K Peters/CRC Press. ISBN: 978-1482229394.

Hocking, J. (2015). Unity in Action: Multiplatform Game Development in C# with Unity 5. Shelter Island, NY: Manning Publications. ISBN: 978-1-61729-232-3.