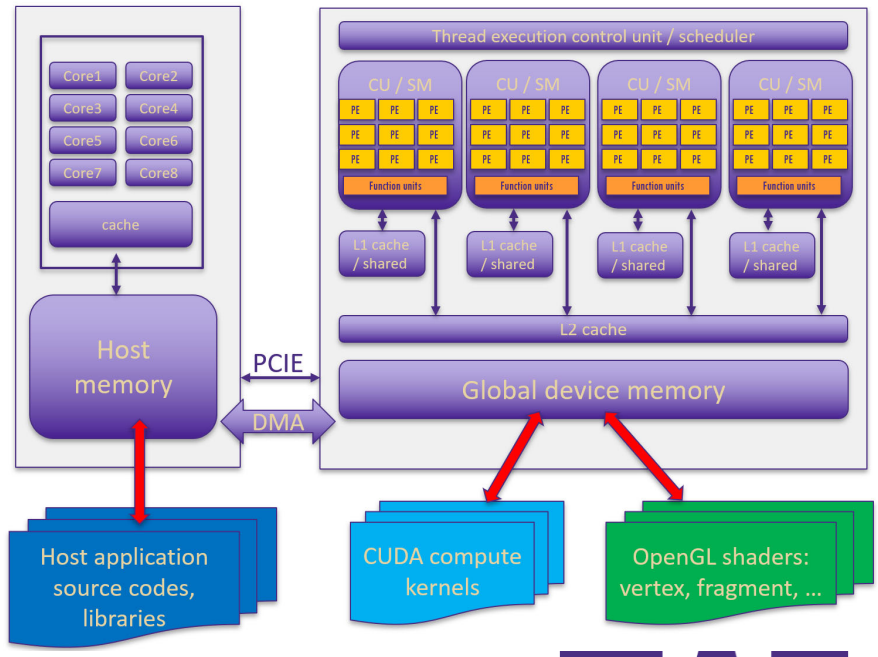
Advanced GPU Computing and Visualization

- Culmination of the GPU-Accelerated Computing and Visualization Certificate track course series
- Builds on foundations established in prior GPU-Compute and SciVis classes
- Specify, design, program, analyze, and optimize a complete application which uses integrated GPU computing (CUDA) and GPU-accelerated visualization (OpenGL)
- Learn to use advanced GPU hardware capabilities: tensor cores, ray tracing cores

- In-depth real-world case studies will be analyzed:
  - convective and radiative heat transfer
  - electromagnetic wave propagation
  - biomedical applications

- Hands-on project-oriented curriculum.
- *Class grade based on a full-scope in-depth project effort.*

- Proficiency in CUDA and OpenGL programming required. This course will not introduce these APIs and assumes students can immediately begin implementing CUDA compute kernels and OpenGL vertex and fragment shaders. (*prerequisites of UW PMP GPU-Compute and SciVis courses or equivalent*)



C/C++ coding intensive!