Advanced GPU-Accelerated Application Engineering

- 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!