**Learning Outcomes**

* Newton’s second law and the equation of thrust
* How combustion and the Brayton cycle create pressure and velocity differentials to produce thrust
* An understanding of Brayton’s cycle to solve the “back of the chapter” homework problems
* Which type of jet engine produces greater thrust
* The contribution of each component to the thrust produced

**EML Learning Outcomes**

* The nominal thrust of a large modern commercial jet engine, and the approximate cost, lifetime, and fuel consumption
* How components (inlet, diffuser, compressor, combustion chamber, turbine, and nozzle) are interconnected and contribute to thrust
* Why cruising altitude is an important parameter for optimizing efficiency
* An understanding of engines to devise a laboratory experiment, measuring thrust of a simple electric fan with force sensors
* Which type of jet engine produces greater thrust/cost
* Opportunities to increase thrust with an assessment of both *feasibility* and *viability*
* A better electric fan (increased thrust)