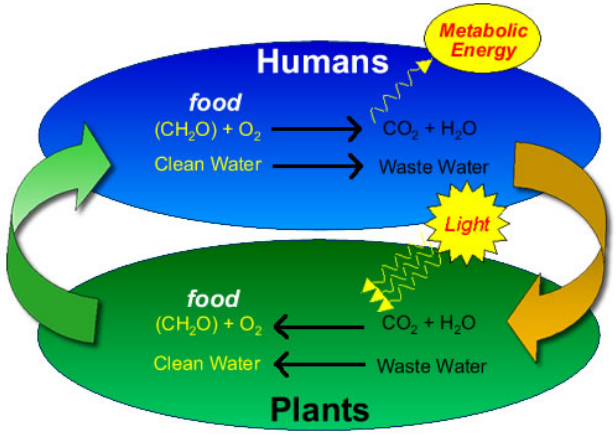
Pamela Danner

- Arbitrary Spectrum Generator
  - **This project is motivated by a need for a tailored spectral intensity profile to match optimum biomass generation requirements in orbital growth environments. A prototype illumination unit and the software interface is being developed. The interface will accept profiles from external files, or will allow the user to create the spectral intensity profile on the fly. A set of primaries using high brightness LEDs will be characterized for spectral intensity. MOSFET drive electronics and thermal management will be developed for a multi-primary illumination cell. The software to generate the arbitrary spectrum from the characterized primaries will be written, and the interface to drive the LED primaries to achieve the desired output spectrum will be created.**



- **Ms. Danner is a junior in TTU's Electrical Engineering Department.**