

# Statement of Purpose Pre-Writing Exercise:

## Build a Table of Undergraduate Research Projects

### Suggestions:

- list projects in order of interest to your targeted reader
- use working titles to describe your research projects
- name your professor/advisor/supervisor

### Sample Undergraduate Research Projects

- ☐ Designed original research into the ultrafiltration of proteins, including developing a theoretical model for design, design and actual prototyping of cross-flow ultrafiltration unit, and experimentation to determine optimal settings for maximal permeate flux. A Biochemical Engineering Laboratory senior project under the direction of Prof. L. Hintzer.
- ☐ Designed a stream remediation project involving liquid-liquid extraction to remove *m*-xylene from contaminated water; also used EPA QUAL2E to model the effects of DO, BOD, and Nitrogen cycle, under the guidance of Prof. L. Hintzer.
- ☐ Conducted research into mathematical models of potential use for codifying chaotic systems such as watersheds, an independent study under NSF grant supervised by Prof. P. Cenczynsky. Abstract and draft findings available at <http://www.HarveyMudd.edu/~czynsky/models2.html>.
- ☐ Designed and conducted original research into quantitative and qualitative properties of a meteorite sample using atomic absorption spectrophotometry, emission spectrophotometry, and induction coupled plasma and laser spectrophotometry under the direction of Prof. R. Hull-Wallace. Results presented at the Argonne National Laboratory during annual meeting of the International Association of Amateur Astronomers, 2014.

This is not just for science students! Similar descriptions can be written about papers and projects in the liberal arts and other fields, e.g., “Designed and conducted an in-depth analysis of the use of lightness and darkness to convey moral authority in Elizabethan poetry of Smyth, Hallbeck, and Colbin, resulting in a 28-page paper presented in summary to the Anderson College English Department Colloquium, Nov. 1<sup>st</sup>, 2013.”

Adapted from *Graduate Admissions Essays* by Donald Asher (Ten Speed Press)  
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