Building Quantitative Skills in the Geosciences: An Example from Undergraduate Physical Hydrology

**Hydrology**

**Logistics**

- **Hydrology**
  - **WAMAP** is intended for use as anquisite tool to pursue Geology and does not require advanced knowledge. It is recommended to take a course in Surveying and Natural Resources or Environmental Science (EAS 303) and Introduction to Geology (EAS 150) prior to taking this course.
  - **WAMAP** is a computer-based software program that allows students to practice and test their understanding of the material. It is recommended to use it as a supplement to traditional classroom instruction.
  - **WAMAP** libraries are available for use by students and educators. They include a large selection of questions that cover a wide range of topics in the field of geology.

**Hydrology**

- **WAMAP** is extremely useful.
  - **WAMAP** is an NSF-funded program with the goal of improving student understanding of quantitative concepts in the geosciences.
  - **WAMAP** is used by students as part of the EAS 303 Hydrology course.

**Geomorphology**

- **WAMAP** is intended for use by students and educators. They include a large selection of questions that cover a wide range of topics in the field of geology.

**Advisories and Successes:**

- **Advantages:**
  - **MUCH less time IN CLASS is spent on fundamental mathematical concepts. Math-averse students continue to gain and keep math skills as part of their general education.

**Conclusions:**

- **Challenges:**
  - Students had more trouble than in previous years with WAMAP, especially with graphing and input of decimal answers. A broader and more specific discipline-specific module for Hydrology would significantly improve **TMY** for my students.