

The Purpose of University Research

-and its applicability to future job performance

Audience: Chemistry (and other science) Majors
with emphasis toward new research students.

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Research Goal 1 Advancement



Research Goal 2: Advance the Student

From self-motivated to self-directed

Knowledge and Comprehension

- Undergraduate years 1-2
- Define, Describe, List, Identify, Recognize
- Explain, Distinguish, Discuss

Application and Analysis

- Undergraduate year 3-4
- Solve, Apply, Develop, Report, Demonstrate, Analyze, Select, Organize, Compare, Contrast, Illustrate, Formulate, Deliver, Direct, Identify

Synthesis

- Undergraduate yr 3-4
 - Specify
 - Relate
 - Explain
 - Execute
- Graduate year 1
 - Create
 - Design
 - Plan
 - Compose
 - Integrate
 - Construct
 - Adapt

Evaluation

- Graduate year 1/2
 - Evaluate
 - Appraise
 - Criticize
 - Decide
 - Defend
 - Judge
 - Justify
 - Assess
 - Self-assess

Over-Arching Outcomes

● Self-Motivated

- Completes a given set of tasks without constant reminders.
- **Expected** level of performance at year 3 of undergraduate studies.

● Self-Directed

- **Evaluates** a given set of tasks,
- **Identifies** what logical tasks are missing,
- Completes them too.
- **Desired** level of performance of seniors.
- **Expected** level of performance of graduate students.
- **Expected** level of performance on the job.

Notice that self-directed effort should begin during the undergraduate years, or the transition to graduate studies will be difficult!

It is up to **you** to take advantage of the **technical** university experience.

- There are 268 chemistry majors out of 17,214 students at SHSU; 98% of students have chosen a different road.*
“I took the road less traveled by, and that has made all the difference.” – Robert Frost
- *“You are on track to become an **independent contributor**, a thinker, a cog in the world’s creative engine. You will be missed if you never develop.” – DLW*

Choosing a Major

- Choose the **MOST DIFFICULT** degree that you can handle because you have hundreds of faculty members who are investing in your success!
- The escalators represent the assistance you receive as you progress through a degree program.
- You still have to work hard making the transition to an independent contributor.
- The ladders represent the lonely work of advancement in the workplace. It is just as difficult as the most difficult university degree.
- This is life. There are no **easy** paths.

But some paths are immensely enjoyable!!



Salary progression based upon the chemistry job opportunities.