

GENERATING RESEARCH IDEAS CHEM 6904

I – Class Details

Instructor: Joseph S. Merola, Davidson 304, 231-4510, jmerola@vt.edu

Class Time: Wednesdays, 1:00 -1:50 pm, Davidson 303

Office Hours: By appointment

II - Learning Objectives

Having successfully completed this course, the student will be able to:

1. Conceive scientific ideas that might ultimately be worthy of development into research proposals.
2. Assess the originality and feasibility of scientific ideas intended to serve as the bases of research proposals.

III – Course Outline

How does one come up with an original research idea? How does one assess the validity and practicality of a research idea? In many ways, there is no way to teach answers to those questions – they come with knowledge and experience. The aim of this course is NOT to have you end up with a polished proposal ready for defense (although that would be nice were it to happen). What this course will attempt to do is give you some guidance, some mentoring and some advice as you struggle with coming up with your ideas for your required original research proposal.

- I. Overview of the Scientific Literature
- II. Reading the scientific literature critically.
- III. Identifying possible research ideas.
 - a. Several presentations by VT faculty on their experiences.
- IV. Confirming originality of research idea.
- V. Being self-critical and objective with your own ideas.
- VI. Ethics and integrity in the proposal process

IV - Evaluation

There will be periodic assignments during the course of the semester in which you will be asked to describe your progress toward and process for developing your original research idea. A final paper (not a proposal) on your original research idea will also be required.