1. **Project Criteria:** Honors projects housed within the Science Department may take several forms that can be grouped into two general categories:

   a. **Hypothesis Based Investigation:** Within the *hypothesis testing* category, we envision multiple types of projects including traditional bench projects (including field science projects that require data collection), survey projects, and computer modeling projects that are grounded in development of a clear hypothesis and set of specific aims that drive the research.

   b. **Service Based Work (Non-Hypothesis Driven):** Although, traditionally, hypothesis based research is the accepted format for scientific inquiry, our department also recognizes the value of *non-hypothesis* based projects including service projects. Examples of this type of project include development of educational programming for local natural science centers or conducting an energy audit of a local business. Non-hypothesis, service based projects would require articulation of the specific outcomes (goals) associated with the project. These would be worked out by the student in collaboration with their mentor.

2. **Selecting a Mentor:** Each fall the Science Department will hold an Honors Project Informational Session for sophomores to help familiarize them with the steps they will need to take in the near future. Students are encouraged to talk with faculty about possible honors project research in their sophomore year. For a typical hypothesis driven projects, students will normally be working on a project that falls within the scope of research being done by a given faculty member. By no later than December 1st every junior Honors student should secure the agreement of the faculty member to serve as a project mentor. Please email Lisa Rhoads ([rhoads@msmary.edu](mailto:rhoads@msmary.edu)) with your mentor’s name and the topic of your honors project.

3. **Discipline Specific Guidelines and Co-Mentoring:** All science majors, regardless of project category, will conduct a study/project that is grounded in one or more scientific disciplines. In the case of students obtaining minors outside of science that have a desire to develop a project which integrates science with the minor discipline, the department will require, in addition to the science faculty advisor, a co-mentor for the project with expertise in the appropriate discipline; however, the main focus of the project will need to be scientific in nature. Students who are double majoring will have the opportunity to choose which major discipline will serve as the primary focus of the honors project. Should an individual with a double major wish to integrate both disciplines, the project would require a co-mentor drawn from a department with the appropriate expertise.

4. **Initial Proposal and Specific Aims of Project:** Currently, the Honors Program requires that students submit a written project proposal in February of the junior year. For students majoring in sciences we would envision this proposal to include a clear statement of hypothesis and specific aims. As with any project, we anticipate that the aims will evolve over time; however, requiring this structural framework from the outset will aid students in defining their major research goals as well as developing a timeline for meeting such goals.
5. **Progress Reports:** In an effort to improve tracking of progress, the department recommends that individual mentors require progress reports, in some form—journal, lab notebook, presentation on a bi-weekly to monthly basis (agreed upon between mentor and student). This element of the project would be incorporated into the mentor’s portion of their final grade.

6. **Requirements for Final Grade:** The final paper should be developed with a format that mirrors that required for primary literature (abstract, introduction, methods, results, discussion). Students must register for __HP470 in fall of their senior year and __HP471 in spring of their senior year. The grade for this course will be recorded by the Honors director on the basis of the mentor’s evaluation (75%) and the evaluation of the public presentation by a member of the Honors Committee (25%). The final grade assigned to __HP471 will also be assigned to __HP470.