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<th><strong>Course Goal(s)</strong></th>
<th>Enable the student to increase his/her knowledge of experimental pathology and how research can be applied to clinical medicine through hands on participation in a research project that will lead to poster presentation and/or publication.</th>
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| **Educational Objectives** | 1. Understand research design including hypothesis generation, selection of study groups, and statistical analysis.  
2. Demonstrate proficiency in performance of immunohistochemical and molecular testing and other research methods as applicable.  
3. Understand the IRB submission process.  
4. Create appropriate spreadsheets for study data and perform data compilation.  
5. Understand basic statistical analysis and appropriate use of statistical methods.  
6. Discuss and present project results.  
7. Compose and submit a project abstract for presentation/publication at a national meeting.  
8. Learn and utilize image analysis technology- flow cytometry, laser scanning cytometry and Aperio, digital Pathology |
| **Course Readings** | Electronic pathology journals  
Textbooks in pathology  
Research journals |
| **Course Activities/Experience** | 1. Participate in determining study design and study cases  
2. Perform technical aspects of the project (bench work) with the assistance of a research technologist.  
3. Make observations and document results of the project. Perform data analysis and determine the significance of the results as they relate to clinical medicine  
4. Present the research project results |
| **On Call Requirements** | Regular duty hours will be 8AM to 5PM. Students may work extended duty hours consistent with PGY1 resident duty hours requirements. There is no in house or at home on call. |
| **Student Performance & Assessment** | - Clarity and accuracy of research presentation  
- Performance of research methods (bench work)  
- Evaluation of written abstract for correct and appropriate analysis and understanding of the clinical context |
| **Other Info** | Special permission is required for this elective. A meeting should be scheduled by the interested student with Dr. Lehman at least one month prior to scheduling this course. |