The course begins with an observing run at Kitt Peak National Observatory near Tucson, AZ the week before the 2017 spring term starts. The class will use the WIYN 0.9-meter telescope and Half Degree Imager CCD Camera to investigate the stellar and gas properties of starburst galaxies in different environments. Each student will get her/his own data, and reduce and analyze it during weekly seminars through the semester, led by the instructor, Anne Jaskot. Scientific results will be presented in a poster session to the full Five College Astronomy Department at the end of the semester, and may result in co-authorship on a published paper.

Some experience with techniques of CCD imaging, photometry, astrometry, and statistical image analysis is expected, gained either in AST 337, another course or previous research experience. *The Five College Astronomy Department will cover the cost of the trip to the telescope, provided you commit to full participation in the class from January through May.*

Enrollment is by permission of the instructor and is limited to 10-12 students. Interested students must submit a written application (see attached form), provide a transcript, a letter of reference from one astronomy professor, and a personal statement that includes why you want to take this course and what your qualifications are. The course is 4 credits and will meet 3 hr/week through the semester, probably Tuesday evenings at Smith College.

**Course logistics:**
- Prepare for observing prior to departure -- complete reading assignment on telescope, instrument manuals, science justification for observing proposal
- Observing at Kitt Peak National Observatory January 19-26
  - Students will be at the telescope in one of two 4-night shifts
  - You may miss one or two days of classes at the beginning of the spring.
- Class Seminar will meet once a week during spring term, 3 hr/wk, on Tuesday evenings from 7-10 pm. Each student will also be expected to work individually on your data for approximately 6 hours a week in order to complete the project.
- Last week of classes: Final project presentations in poster session to FCAD. No exam.

**Application Form:** AST 341 Observational Techniques II, Spring 2017
Name:

School:

Email address:

Year:

Major:

Courses in Astronomy:

Courses in Physics:

Experience with Computer Programming:

Have you taken AST337? If not, what previous experience qualifies you for this course?

If accepted for the course, are you prepared to sign a form saying you agree to complete the course (trip to Tucson AZ for 4-5 days in January+ academic term seminar) in order to qualify for full travel funding?

Do you have a preference for observing in the first or second half of the week of Jan 19-26?

Include with application: completed form, academic transcript, one page (or less) personal statement, name of astronomy professor who has agreed to write a reference for you.

Submit application to astronomy department at your school:
D. Dyar (MHC), S. Hameed (HC), M. Stage (AC), S. Edwards (SC), R. Snell (UMass)