# Astronomy 511: Topics in Observational Extra-galactic Astronomy

## Time and location:

Monday 1:30 pm - 4.30pm in Elliott Chart Room.

### **Course overview:**

The scope of this class includes topics of star formation, the interstellar medium, stellar structure and central supermassive black holes in galaxies over cosmic time. Material will be based on the contents of Annual Reviews in Astronomy & Astrophysics (ARA&A) articles. <u>ARA&A</u> is an annual publication in which experts provide a survey of the state of their field; these articles therefore provide excellent, contemporary, pedagogical overviews of a particular subject.

This course will take a peer-taught approach, in which students will take turns in preparing material for the weekly lectures. Students will be free to choose (under the direction of the instructor) the articles they present, such that the class has the flexibility to shape the direction of their learning.

## Lecture content/readings:

Every week, two students will give an approximately 1 hour lecture (each) based on their choice(s) of ARA&A article. Articles can be accessed directly from the <u>ARA&A web</u> <u>page</u> or pdf versions are also available on <u>ADS</u>. Don't hesitate to ask me if you are having trouble finding the articles. Any article whose topic is centred on observational extra-galactic astronomy is potentially acceptable (the instructor reserves the right to flag a suggested article as either inappropriate to the scope of the course, or suggest an alternative to ensure diversity of content). It is highly encouraged to select articles from 2014 or later, in order to ensure we are covering contemporary material. For a short-cut, a (non-exhaustive) list of possible articles is summarized <u>here</u>.

The weekly presentations are not intended to be a paraphrased version of the original article. Instead, the presenter should provide the class with any necessary background material, and choose material drawn from the article sufficient to fill one hour (which might range from as little as a single section of the article, to the entire thing!).

It is encouraged (but not required) that each student pair in a given week present (non-overlapping) material from the same article, in order to promote working together on their presentations and understanding of material, as well as to provide maximum coverage of the topic.

Students should <u>sign up</u> to present TWICE during the course (first week is a presentation by the instructor). The spacing is entirely at the student's discretion (choose when suits you best) - slots are filled on a first come, first-served basis, and any swaps can be negotiated amongst students directly. Students not presenting in any given week are not required to read the article in advance - on weeks when you are not presenting you just have to turn-up, learn and participate in discussion.

In addition to your name sign-up, no later than 1 week prior to your presentation, you should check that your ARA&A article of choice is suitable for the course, by email to me (sarae@uvic.ca). Once approved, please include the article reference in the <u>sign up spreadsheet</u>.

#### Assessment:

The primary component of the assessment is based on lecture presentations given by the students each week. These marks will be assessed on preparedness, understanding and generation of discussion. The balance of the assessment will be based on class participation in discussions (on weeks when not presenting). It is expected that EVERY student participate in discussion and ask at least one question every week.

Lecture presentations: 80% Participation: 20%

#### **Presentations:**

- 1. Course overview
- 2. Sara's review: Sanchez (2020)
- 3. Scott and Bobby's review: <u>Forster-Schreiber and Wuyts</u> 2020