FFR141 – Complex Systems Seminars, instructions

Introduction

The complex systems seminar course has dual objectives. The first is to become exposed to different issues, advances and problems in complexity science and to aid in the development of a picture of the scope of complex systems research. The second is for the students to improve their ability to prepare and hold presentations.

The first objective is addressed in the lectures in the first quarter and in the student presentation in quarters 2-4.

The second objective is addressed in the final lecture in the first quarter and by preparing, giving and providing feedback on presentations in quarters 2-4.

Student contact information etc.

Please send ASAP an email to claeand@chalmers.se with subject FFR141 2016 containing the following, each on one line:

- First name
- Last Name
- Personnummer (for reporting grades)
- Chalmers/GU (to indicate where to submit grades)
- Y/N (are you a new student? N indicates that you're completing attendance)

The Groups

Students are grouped hierarchically into two levels:

Presentation Groups consisting of ~3 students each.

Discussion Groups consisting of ~3 PG's – i.e. ~9 students – each.

Each Presentation Group has the duty to **(i)** act as reviewers, and, **(ii)** prepare discussion questions, for one other presentation during the year.

The groups are specified on the StudyCAS web page (http://www.studycas.com/c/courses/complex-systems-seminars.) Email addresses to your fellow group members will be distributed by sending out emails to all groups where the members will be in the recipient lists. Please save these emails for future reference.

Schedule

Time frame	Presentation Group	Review Group
By 4 weeks before	Meet, discuss and come up with a topic together. Clear it with Claes in class or via email (claeand@chalmers.se). Not clearing the topic invokes a risk of not getting to	

	present (fail grade.) **It is advisable to discuss the topic well in advance of 4 weeks before.**	
2-4 weeks before	Work together on the presentation, producing a draft that can be presented to the Review Group in the Dry Run. Contact your Review Group, decide on a place and time for the Dry Run and send over any relevant literature.	In consultation with the Presentation Group, decide on a place and time for the Dry Run. Read preparatory literature indicated by the presentation Group; i.e. literature that the seminar seeks to introduce.
2 weeks before	Deliver the Dry Run presentation at the decided time and place. Note and discuss the feedback provided by the Review Group and consider ways of refining the lecture in response. Discuss also questions/issues that the Review Group will offer for discussion during the session: can the lecture be co-adapted with these questions/issues?	Participate in the Dry Run: critically evaluate the presentation and provide constructive feedback that helps the Presentation Group come up with the best possible lecture. Begin the process of coming up with 3-5 questions/issues for the Discussion Groups during the session. Mind closely the *Instructions for Review Groups* below!
1 week before	Send title and an abstract of maximally 200 words to claeand@chalmers.se to be posted on the course web page, and distributed to the class via email.	
0-2 weeks before	Led by the feedback and experience during the Dry Run, work on the Lecture and rehearse its components in preparation for the session day. Discuss things that are unclear, or where you want a second opinion, with the Review Group over email or personal meetings.	Prepare the 3-5 questions/issues that the Discussion Groups will be presented with and decide on how to present them during the five minutes during which you will introduce them. **Arrange with the Presentation Group to have them included as the last slide(s) of the Lecture! (to avoid loss of time from changing equipment)**
0 weeks before	Deliver the presentation	Deliver the questions/issues for discussion.

The layout of a session

10:00-10:30	The Presentation Group delivers the presentation
10:30-10:35	The teacher(s) offer their reflections, reactions and contextualization
10:35-10:40	The Review Group presents the 3-5 questions/issues

10:40-11:10	Break and Discussion – The Discussion Groups move to locations of their choice (in the class room, cafeteria or elsewhere) to begin the Group Discussion sessions.
11:10-11:40	Each Discussion Group have 2-3 minutes to, in turn, present reflections/conclusions based on their discussions. We open up for general discussion during the last 10-15 minutes.
11:40-11:45	Session ends, teacher and Presentation Group sit down together to de-brief.

(i) Presentation. At each seminar, one Presentation Group will hold a presentation. The topic will be broad, firmly based in scientific literature and carry a clear focus. It's a good idea to depart from scientific literature and contextualize the material with related research, rather than going into deep technical detail.

While we encourage division-of-labor, every part of the lecture must be integrated, and all students must participate in the verbal presentation to some extent, so that everyone will have the opportunity to practice their presentation skills.

If one of the presenters is for any reasons unable to contribute sufficiently in preparations and delivery of the presentation, they will receive an extra homework assignment: they will have two weeks to formulate a popular-scientific text for the StudyCAS website on a CAS topic of their choice. If this is not done, or the text is not of acceptable quality, they will receive a failed grade.

(ii) Review Group's questions/issues. After the presentation and teachers' comments, the Review Group will take the stage. The review group will have prepared 3-5 open questions/issues for discussion around the topic of the presentation. They will spend around 5 minutes presenting and contextualizing these questions and inspiring interesting discussions. Arrange with the Presentation Group to have suitable slide(s) at the end of their material so that it's not necessary to change equipment.

We feel that good questions will be open and contextualizing. For example, along the lines of "give examples of how these methods be applied in practice" or "how could this research be extended further - what would a relevant research direction be?" A bad question would be a closed question, which does not open up for interesting discussions (for example "What is the airspeed velocity of an unladen swallow?"[1])

Following this the groups will meet up in a chosen place for discussions in the vicinity of the classroom (both Bulten and the workroom nearby provides excellent places for this.)

(iii) Group discussions. The Discussion Groups will meet and discuss the questions/issues offered by the Review Group. These discussions will be "open-book" (or perhaps rather "open laptop".) In other words, you may use any sources to find information to respond to the questions and come up with interesting ideas. We encourage creativity! The presenters and reviewers will take part in the discussions like anyone else.

[1] 11 m/s according to Wolfram Alpha, but it may depend on whether it is an African or European swallow.

You may, if you deem it necessary, bring up issues and questions other than those that the Review Group presented.

As part of the discussion, we also ask each group to fill out a common evaluation form of the presenters' presentation skills, to give constructive feedback on what was good and what could have been improved.

(iv) Full group discussion. After the group discussions, we reconvene in the classroom to discuss in full group.

Finally, we open up the floor for general comments and questions.

Instructions for Presentation Groups

The topic should be broad and clearly related to complexity theory. It can for example cover areas, methods, theories, landmark results and so on (e.g. things like chaos, fractals, agent-based simulation, population biology, social networks etc. etc.) Some of the presentations from previous years have a suitable scope, but some do not since the format was different then.

Help each other: put interesting articles on the StudyCAS paper repository!

Google Scholar is great for finding papers.

The presentations should take 30 minutes to deliver - not more, not less.

You can divide the work up in any way that you want, for example by dividing the development and presentation of the content into sub-topics and take turns speaking, etc. The lecture should, however, be a cohesive whole (not a juxtaposition of three smaller presentations) where all members of the Presentation Group participate in the presentation.

Please consult the material from the lecture on giving oral presentations, which will be linked to here. Students are also encouraged to book a session with a student tutor at the Chalmers Open Communication Studio.

Instructions for Review Groups

The role of the Review Group is twofold:

1) To help the Presentation Group improve their presentation during the last weeks of preparations, beginning with the Dry Run.
2) To seed the discussion session with 3-5 questions/issues, with the benefit of being more closely acquainted with the lecture than the others.

Make sure to arrange so that the Presentation Group includes your questions in their presentation at the end!

Some things to look for during the Dry Run:

- Does the presentation constitute a good narrative or not? Does it have a beginning and an end, and a “red thread”? If the presentation goes too far from the subject too often it may only leave the audience confused.

- Does the lecture lend itself well to being the subject of discussions in small groups and the whole class? How can it be improved in this respect?
- What issues can you raise during your brief opening of the class discussion session that will serve to improve the function of the presentation in the respect of the previous point?
- Are there too many slides? Is there too much on the slides? Will they be able to finish on time?
- Is there too much un-introduced terminology, math that will be hard to follow, and so on? While these things may be ok under certain circumstances (terminology may be introduced by the presenter for example) they should still be minded!
- Is the presentation of general interest? Can it be generalized? Put into a broader context?