MATH 4900E: SEMINAR

YUNG PO LAM

Scheme of Work

- Week 1: Organizational meeting, formation of groups (Sep 9, 2:30pm–4:15pm)
- Week 2: Each group meets with instructor to decide on their topic
- Week 3: Each group writes a proposal / study scheme (see Remark 1)
- Week 4: Each group meets with instructor to discuss the proposal, and revise it as necessary
- Week 5: Meeting to present the proposal (Sep 30, 2:30pm–3:30pm; see Remark 2)
- Week 6–7: Group study
- Week 8: Meeting to present any progress (Oct 28, 2:30pm–4:15pm; see Remark 3)
- Week 9–10: Group study
- Week 11–13: Final presentation (Nov 18, Nov 25 and Dec 2: 2:30pm–4:15pm; see Remark 4)

Assessment Scheme

- Written proposal 10%
- Presentation of proposal 10%
- Mid-term presentation of progress 20%
- Final presentation 50%
- Class participation 10%

Remark 1. The proposal / study scheme should be about 1 to 2 pages long (2 pages max), and include:

- Some introductory / background material
- Questions to be considered by the group
- How the group would approach the questions raised
- Useful references to consult (an initial list will do; you can expand this list as time goes on)
- Division of labour

The proposal will be evaluated in terms of content, clarity and feasibility. Each member of the group receives the same score. It counts towards 10% of your grade.

Remark 2. Each group will give a presentation of 15 minutes about what they are going to study. A good presentation should include:

- Some introductory / background material
- Questions to be considered by the group
- How the group would approach the questions raised
- Useful references for the audience

The presentation will be evaluated in terms of content, clarity and pedagogy. Each member of the group receives the same score. It counts towards 10% of your grade.

Remark 3. Each group will give a presentation of 30 minutes about their progress. The detailed structure of the presentation should be worked out by all group members together, but ideally every member of the group speaks for about 10 minutes (since each member should have read or done something different, and have something to present on his/her own). Some possible elements of a good presentation are:

- Statement of one of the most interesting theorems studied so far
- Sketch of proof (or alternative proofs) of that theorem if appropriate
- Additional references you have found since the presentation of the proposal
- A study scheme for the next few weeks

(You do not need to include them all; they are just examples of good elements to help you prepare for the presentation.)

The presentation will be evaluated in terms of content, clarity and pedagogy. Each member of the group receives an individual score. It counts towards 20% of your grade.

Remark 4. Each group will give a presentation of 90 minutes about their progress. The detailed structure of the presentation should be worked out by all group members together, but ideally every member of the group speaks for about 30 minutes (since each member should have read or done something different, and have something to present on his/her own). Some possible elements of a good presentation are:

- Statement of one of the most interesting theorems learned in this course
- Sketch of proof (or alternative proofs) of that theorem if appropriate
- Materials that supplement the topic of your presentation
- Connections to other mathematics you have learned elsewhere
- Further possible directions of investigation

(You do not need to include them all; they are just examples of good elements to help you prepare for the presentation.)

The presentation will be evaluated in terms of content, clarity, pedagogy, and response to questions raised during / after the presentation. Each member of the group receives an individual score. It counts towards 50% of your grade.

Remark 5. Another 10% of your grade will be determined by your own class participation (e.g. engagements in other groups' presentations).

Remark 6. As an optional exercise, you may choose to write up an article about the topic you have studied in this capstone course. On top of being a good memory for yourself, a write-up of high quality could also be published in some undergraduate journals, or be posted somewhere online.