

**MATH 491: Senior Seminar**  
**2 credits (Spring 2012)**

**Instructor:** Cătălin Ciupercă, Minard 412J, 231-8192

**E-mail:** catalin.ciuperca@ndsu.edu.

**Seminars:** WF 4:00-4:50 pm, Minard 135.

**Office Hours:** M 1:00-1:50 PM, WF 3:00–3:50 PM and by appointment.

**Prerequisite:** Math 270.

**Other information:** On Blackboard you will be able to find several useful resurces.

**Course Description:** Students will write a short expository or research paper (11–16 pages, 11 pt. font, single-spaced) under the guidance of a mathematics faculty member adviser. The paper will be prepared using the typesetting system  $\LaTeX$ . At the end of the semester, the students will give a 15 minute public presentation describing their work.

**Grading:** A maximum number of 14 points will be awarded as follows: paper proposal (2 points), first draft (2 points), second draft (2 points), practice presentation (2 points), participation in review of practice presentations (2 points), final presentation (2 points), final paper (2 points). If  $P$  denotes the total percentage obtained in this class, the final grades will be assigned as follows: A ( $P \geq 90\%$ ), B ( $80\% \leq P < 90\%$ ), C ( $70\% \leq P < 80\%$ ), D ( $60\% \leq P < 70\%$ ). The number of points you accumulate will be periodically updated on Blackboard.

**Paper proposal:** Your paper proposal should contain the following: name of adviser, project topic, preliminary list of the titles and authors of the books/articles that you intend to use for the project (preliminary bibliography). The adviser should be a mathematics professor at NDSU who agrees to work with you. It is advisable to choose an adviser with whom you have taken a 400-level class. However, the topic should involve a *mathematics* problem that was not part of a course that you took as an undergraduate student. *The topic is subject to approval by the Senior Seminar instructor.*

Grading of the paper proposal:

2 points: proposal submitted on time with adviser's approval, acceptable topic, and bibliography.

1 point: proposal submitted late or without adviser's approval, acceptable topic, or bibliography.

0 points: no proposal submitted.

**Draft papers:** You will be required to submit by e-mail two drafts of your paper. The first draft must demonstrate significant progress on the paper. At this time you will receive some feedback from the seminar instructor.

Grading for the first draft:

2 points: draft submitted on time and showing reasonable progress

1 point: draft submitted late or not showing reasonable progress

0 points: no draft submitted

The second draft should be a version of the paper that is complete from your point of view and must incorporate the revisions requested by the instructor after the first draft. *Your faculty adviser will have to confirm that the paper is acceptable in this form.*

Grading for the second draft:

2 points: draft submitted on time with the adviser's approval and showing reasonable progress

1 point: draft submitted late or without adviser's approval, not showing reasonable progress or not incorporating the revisions requested.

0 points: no draft submitted

**Practice presentations:** Each student will give presentation and a practice presentation using Beamer.

Grading:

2 points: the presentation is organized and covers relevant material

1 point: the presentation is not organized or covers irrelevant material

0 points: no presentation is given

During the practice presentations the students will have to provide feedback on the presentations of their colleagues (2 points).

**Expectations:** The e-mail will be an important mode of communication in this class. Students are expected to reply promptly to the messages regarding the course. It is your responsibility to check regularly your ndsu.edu e-mail account.

**Tentative Schedule:** In addition to your weekly regular meetings with your faculty adviser, the following is a list of important class meetings. The instructor reserves the right to make reasonable changes to the schedule. There may be **additional meetings which will be announced by e-mail.**

11 January	4:00 PM	Minard 135	Course policies
13 January	4:00 PM	Minard 135	L <sup>A</sup> T <sub>E</sub> X
18 January	4:00 PM	Minard 135	L <sup>A</sup> T <sub>E</sub> X
20 January	4:00 PM	Minard 135	Paper proposals
25 January	4:00 PM	Minard 135	L <sup>A</sup> T <sub>E</sub> X
27 January	4:00 PM	Minard 135	L <sup>A</sup> T <sub>E</sub> X
1 February	4:00 PM	Minard 135	L <sup>A</sup> T <sub>E</sub> X
3 February	4:00 PM	Minard 135	Using MathSciNet and BibTeX
8 February	4:00 PM	Minard 135	Using MathSciNet and BibTeX
15 February	4:00 PM	Minard 135	class meeting (progress check)
29 February	4:00 PM	Minard 135	class meeting (progress check)
7 March	4:00 PM	Minard 135	class meeting (progress check)
21 March	5:00 PM	e-mail	<b>First draft due (T<sub>E</sub>X and PDF files)</b>
23 March	4:00 PM	Minard 412J	Individual meetings (discussion of the first draft)
28 March	4:00 PM	Minard 412J	Individual meetings (discussion of the first draft)
30 March	4:00 PM	Minard 412J	Individual meetings (discussion of the first draft)
4 April	5:00 PM	e-mail	<b>Second draft due (T<sub>E</sub>X and PDF files)</b>
11 April	appt.	Minard 412J	Individual meetings (discussion of the second draft)
11 April	4:00 PM	Minard 135	Using Beamer
13 April	appt.	Minard 412J	Individual meetings (discussion of the second draft)
13 April	4:00 PM	Minard 135	Using Beamer
16 April	5:00 PM	e-mail	<b>Presentation files due (T<sub>E</sub>X and PDF files)</b>
18 April	4:00 PM	Minard 412J	Individual meetings (concerning the presentation material)
20 April	4:00 PM	Minard 412J	Individual meetings (concerning the presentation material)
23 April	4:00 PM	Minard 135	Practice presentations (note that this is Monday)
25 April	3:00 PM	Minard 135	Practice presentations (room available until 6:00 PM)
27 April	3:00 PM	Minard 135	Practice presentations (room available until 6:00 PM)
30 April	4:00 PM	Minard 135	Final presentations (note that this is Monday)
2 May	4:00 PM	Minard 135	Final presentations (room available until 6:00 PM)
4 May	4:00 PM	Minard 135	Final presentations (room available until 6:00 PM)
9 May	5:00 PM	email	<b>Final papers due (T<sub>E</sub>X and PDF files)</b>

**Other information:**

- MiKTeX (implementation of T<sub>E</sub>X and related programs for Windows, including the editor and previewer TeXworks)  
<http://miktex.org>

- MacTeX (implementation of T<sub>E</sub>X for Mac OS X) and TeXShop (T<sub>E</sub>X editor and previewer for Mac OS X)  
<http://www.uoregon.edu/~koch/texshop/>
- Most Linux distributions already have installed an implementation of T<sub>E</sub>X. TeXworks is also available for Linux.
- Math into L<sup>A</sup>T<sub>E</sub>X, by George Grätzer  
[http://www.ctan.org/tex-archive/info/Math\\_into\\_LaTeX-4/](http://www.ctan.org/tex-archive/info/Math_into_LaTeX-4/)
- L<sup>A</sup>T<sub>E</sub>X, a wikibook  
<http://en.wikibooks.org/wiki/LaTeX>

**Special Needs:** Any students with disabilities or other special needs, who need special accommodations in this course are invited to share these concerns or requests with the instructor and contact the Disability Services Office as soon as possible.

Veterans and student soldiers with special circumstances or who are activated are encouraged to notify the instructor in advance.

**Academic Honesty:** The academic community is operated on the basis of honesty, integrity, and fair play. NDSU Policy 335: Code of Academic Responsibility and Conduct applies to cases in which cheating, plagiarism, or other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the Office of Registration and Records. Informational resources about academic honesty for students and instructional staff members can be found at [www.ndsu.edu/academichonesty](http://www.ndsu.edu/academichonesty).

*Last revised: 10 January 2012.*