Geography 307

Digital Cartography

Course Description

The course provides a general introduction to digital cartography and map making. Principles of cartographic generalization, cartographic symbolization, graphic variables, and thematic mapping methods are covered. Students will be introduced to basic functions of the graphics software Adobe Illustrator and will create their own thematic maps by following the (digital) map compilation process.

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Instructor	Dr. Julia Siemer
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Office Hours	Monday and Tuesday 1:00 pm–2:00 pm or by appointment

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Textbook	SLOCUM, T.A., R.B. McMaster, F.C. Kessler, H.H. Howard (2009): *Thematic Cartography and Geovisualization*. 3rd edition. Prentice Hall. ISBN 978-0-13-229834-6. Available at the University Bookstore
Other recommended reading	ANSON, R.W. and F. Ormeling (2002): *Basic Cartography for Students and Technicians*. Volume 2. 2nd edition. Butterworth-Heinemann
	KRAAK, M.-J. and F. Ormeling (2010): Cartography. *Visualization of Geospatial Data.* 3nd Edition. Prentice Hall
	KRYGIER, J. and D. Wood (2005): *Making maps: a visual guide to map design for GIS.* Guilford Press
	ROBINSON, A.H., J.L. Morrison, P.C. Muehrcke, A.J. Kimerling and S.C. Guptill (1995): *Elements of Cartography*. 6th edition. Wiley
	TUFTE, Edward R. (1990): *Envisioning Information*. Graphics Press
	All books are available at Archer Library
URCourses	Selected course materials will be made available on URCourses. Check also the calendar on URCourses for up-dated class information. If you choose to use a personal e-mail account for communication, please forward your U of R e-mails to this account. Please specify meaningful subjects for all e-mails.
Lecture Time	Tuesday, Thursday: 2:30 pm–3:45 pm: CL 135
Prerequisites	GEOG 207 or permission of department head

Other materials	USB memory stick for lab materials and assignments	

Attendance policy Attendance at all times is recommended. Attendance at **Illustrator sessions is mandatory**.

Evaluation

Illustrator map 1 (required)	10%
Illustrator map 2 (required)	10%
Illustrator map 3 (required)	10%
Illustrator map 4 (required)	15%
Illustrator map 5 (required)	15%
Final mapping project – proposal (required, due date: Mar 01, 2018)	5%
Final mapping project – map (required)	25%
Final mapping project – report (required)	10%
(due date of **final mapping project: Apr 12, 2018**)	
	100%

Tentative topics of thematic mapping assignments

Map 1: Population in Europe (8.5 x 11)
Map 2: Population in Berlin (8.5 x 11)
Map 3: Education in Canada (8.5 x 11)
Map 4: Canadian Diversity (8.5 x 11)
Map 5: Any topic and mapping technique of your choice (8.5 x 11)

Final mapping project: Any topic and mapping technique of your choice (up to poster size); you are required to submit a written proposal which briefly discusses the anticipated topic, mapping technique, data sources (thematic and base data), as well as references to other maps of the same topic and/or applying the same/similar mapping technique and further references.

Note
Students of this course are strongly encouraged to submit the final mapping project or Map 5 to the Student Mapping Competition of the Canadian Cartographic Association (CCA) at its annual meeting in Lawrencetown, NS, in Spring of 2018. More information can be found at: www.cca-acc.org

Knowledge and Effort

This course requires <u>computer file management skills and the ability to work within a Apple computer environment without assistance.</u> Students are expected to spend considerable time developing thoughtful products, as well as conducting limited research to feed into their written and thematic mapping assignments. Students must demonstrate a mature, professional, and conscientious effort toward class work and participation.

In addition to class hours, students should expect an average weekly work-load of 1 hour for readings and up to 3 hours of individual (computer) work (depending on previous experience with Adobe Illustrator or similar products).

Late assignments and missed examinations

All assignments, projects and exams are required. A missed or late assignment or exam results in a grade of NP for the course. Due dates for assignments will be specified. **Assignments or projects that are submitted late will be penalized 10% per day** (including weekends, starting with the due day). Assignments/labs or project components submitted **more than 3 days late are not accepted** and result in a grade of NP for the course. A missed exam can normally not be written at a later time.

(See also section Accommodations)

Accommodations

Any student with a disability who may need accommodations should discuss these with the course instructor after contacting the Coordinator of the Disability Resource Office at 585-4631.

If you are **unable to complete an assignment, midterm examination or components of the final project** for compassionate or health reasons, contact the instructor **as soon as possible**. A medical certificate from an attending physician must accompany the request if the reason is medical. For other reasons, such evidence as is appropriate should be provided.

Recording of lectures

Students must be aware of two issues regarding audio, image or video recording of lectures. First, a lecture/lab is considered the intellectual property of the instructor, and copyright guidelines and regulations apply to the recording of lectures. Second, there is a need to protect the privacy of students in the class from being recorded without their knowledge and permission. As such, <u>students in this course may not create recordings of any kind in this class</u>. Any student creating unauthorized will be subject to disciplinary action under §5.13 of the Undergraduate Calendar.

Students requiring recordings as an accommodation for a disability, and who have documentation from the Centre for Student Accessibility, are exempted from this restriction. Students in this position must speak to the instructor prior to recording lectures, and any such recordings are solely authorized for the purposes of individual study.

Tentative Course Schedule*

Week	Date	Lecture Topic	Required Readings (p)
1	Jan 09	Introduction to the course, policies, assignments	--
	Jan 11	Map characteristics	1–12
2	Jan 16	(Topographic) base data, thematic data, data acquisition	--
	Jan 18	Map design I: principles of symbolization, cartographic generalization	76–85, 96–112
3	Jan 23	Map design II: cartographic design, legends, typography	211–230, 188–210
	Jan 25	Thematic mapping techniques: choropleth maps, dot distribution maps, proportional/range-graded symbol maps, isarithmic maps; **Final mapping project will be handed out**	251–269 302–325 281–300
4	Jan 30	Adobe Illustrator Intro	--
	Feb 01	Adobe Illustrator Intro	--
5	Feb 06	**Map 1 will be handed out** – Mapping technique: choropleth map	251–269
	Feb 08	Map compilation process	--
6	Feb 13	**Map 1 due**; **Map 2 will be handed out** – Mapping technique: proportional/range graded symbol map	302–325
	Feb 15	Mapping and colours	173–182,186
	Feb 19–23	*Reading week*	*--*
7	Feb 27	**Map 2 due; Map 3 will be handed out** – Mapping technique: choropleth map in combination with diagrams	--
	Mar 01	Map discussion; **Proposal for final mapping project due**	--
8	Mar 06	**Map 3 due;** Map discussion – **Map 4 will be handed out** – Mapping technique: multivariate map	327–353
	Mar 08	Map Discussion	--
9	Mar 13	**Map 4 due, Map 5 will be handed out** – Mapping technique: any technique	--
	Mar 15	GIS and maps, Map discussion	--
10	Mar 20	Map discussion; **Map 5 due**	--
	Mar 22	Map discussion; work on individual Final Project	--
11	Mar 27	Map discussion; work on individual Final Project	--
	Mar 29	Work on individual Final Project	--
12	Apr 03	Work on individual Final Project	--
	Apr 05	Work on individual Final Project	--
13	Apr 10	Work on individual Final Project	--
	Apr 12	**Final Project is due**	--

* subject to change, check URCourses for up-dates