

GEOG 2200 Course Outline

Introduction to Thematic Cartography

1. General Information

Lecturer: David Walker
(David.Walker@umanitoba.ca)
Office Location: 253 Wallace Building
Office Hours: By Appointment Only
Lecture Location: 321 Wallace
Lecture Time: 11:30 – 13:00 TR
Lab Location: 321 Wallace
Lab Time: 14:30—17:15 pm W

Objectives: An introduction to the principles of map compilation and reproduction, including analysis and cartographic display of spatially referenced data. Emphasis will be placed on cartographic data manipulation, generalization, and symbolization, map design, visualization and communication. Lab assignments will provide practical experience with cartographic software.

2. Materials

Required Textbook:

Kraak, M.-J., & Ormeling, F. (2020). *Cartography: Visualization of Geospatial Data* (4th ed.). CRC Press <https://doi.org/10.1201/9780429464195>

Required Software: It is expected that all students will have a general knowledge of spreadsheets, word processors, and presentation software. We will be using ESRI ArcGIS 10.8 StoryMaps in this course. It is the responsibility of each student to learn these packages. All software is provided in the Lab.

Using Copyrighted Material: Please respect copyright. We will use copyrighted content in this course. I have ensured that the content I use is appropriately acknowledged and is copied in accordance with copyright laws and University guidelines. Copyrighted works, including those created by me, are made available for private study and research and must not be distributed in any format without permission. Do not upload copyrighted works to a learning management system (such as UM Learn), or any website, unless an exception to the Copyright Act applies or written permission has been confirmed. For more information, see the University's Copyright Office website at: <http://umanitoba.ca/copyright/>. Citation

of copyrighted or any source materials in written assignments for this course should use the reference styles as outlined in either of the following:

Council of Science Editors. Style Manual Committee. (2014). *Scientific style and format : The CSE manual for authors, editors, and publishers* (8th ed.). Chicago (IL): Council of Science Editors in cooperation with The University of Chicago Press.

American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). Washington, DC.

Recording Class Lectures: Dr. David Walker holds copyright over the course materials, presentations and lectures that form part of this course. No audio or video recording of lectures or presentations is allowed in any format, openly or surreptitiously, in whole or in part without permission of Dr. David Walker. Course materials (both paper and digital) are for the participant's private study and research.

3. Evaluation

Final Exam	45%
Workshop	10%
Lab Assignments* (5 x 6%)	30%
Project*	15%

*Assignment and Project due dates will be provided in lab.

4. Grade Distribution Scale

Grade	Range
A+	>= 90%
A	80 – 89%
B+	75 - 79%
B	70 - 74%
C+	65 – 69%
C	60 – 64 %
D	50 - 59%
F	<= 49%

5. Computer Lab

Lab Attendance: All materials including specifics of each assignment and instructions for their completion (written and supplemental), and data and software, are provided on-line. Because computer software is constantly changing, it may be necessary to provide

instructions during lab time for unforeseen and unforeseeable events (e.g. new computer virus or system patch). These instructions will be provided in a clear and concise manner in the lab and in person. Attendance of all labs is required for a passing grade in this course.

Policy on Technology and Lab Use: It is general University of Manitoba policy that all technology resources are to be used in a responsible, efficient, ethical and legal manner. Students can use all technology provided by on-line servers for educational purposes approved by the instructor and/or the University of Manitoba Disability Services. Students should not participate in personal direct electronic messaging/posting activities (e-mail, texting, video or voice chat, wikis, blogs, social networking (e.g. Facebook) or online and offline “gaming” during scheduled class time.

Lab Server Use and Policy: The Geography Lab Server is on a network separate from UMNNet and uses different user id and password credentials. However, the computers are first unlocked using UMNNet credentials (a University of Manitoba email). You must have an active UMNNetID and password for this course. An account on the server will be provided and you will be given a **Home** folder on the server. This folder is for course materials only. Papers and documents related to other courses are strictly not allowed to be saved in this folder. Multimedia and other files downloaded from the Internet must relate to course materials. Saving inappropriate, copyright restricted or illegal materials on the lab server may result in academic punishment and or other penalties.

Detailed instructions regarding access and use of the server will be provided during the first lab session.

Lab and Project Distribution: Lab assignments and the course project will be provided on the **Lab Server**, except Lab 1. Lab 1 will be distributed to students from a link on UMLearn.

Lab Report Submissions: Lab assignments and the course project will be submitted on the assigned date, on the **Lab Server**, except Lab 1. Lab 1 will be submitted to a UMLearn dropbox. Lab reports can consist of **multiple** components including a written report and other digital deliverables (e.g. maps, databases, posters, graphs etc.). When more than one document and deliverables are required, students should place all files in a **new** folder and then zip the

folder into a compressed archive (instructions will be provided in lab).

All assignments **MUST** be named properly, be complete and **MUST** open to be considered finished. Specific instructions will be provided in the lab.

6. Format of Lab & Project Reports

The written report and deliverables must be organized and follow the instructions provided in the lab assignments. General requirements and structure for lab assignments are as follows:

1. Laboratory reports must be typed, have single line spacing, and using a 12-point font.
2. Reports should be well-organized and well-written. Proper grammar and spelling will be considered in grading.
3. Reports should be no more than 2000 words in length (except the project which is 2500 words), and excluding Figures, Tables and Maps.
4. Reports will have the following basic structure:
 - (a) **Title Page:** include your Student ID #
 - (b) **Introduction:** a short paragraph or two, to give perspective to the report. Include a clear statement of objectives.
 - (c) **Materials and Methods:** describe any additions or modifications to the steps provided in the assignment hand-out.
 - (d) **Results:** Include the results of analyses or maps requested in the lab assignment. These are numbered sequentially in the lab handout. You must answer questions in the lab numerically in sequence. You are also expected to include all Deliverables requested, captioned and appended to the written portion of the report. Many Deliverables include maps published as PDF files. These are also to be included in the hand-in as requested (see Electronic Appendix below).
 - (e) **Discussion:** Typically a topic of discussion will be suggested, and you will incorporate your results into that discussion topic.
 - (f) **References:** all primary sources must be identified using APA/CSE/CBE guidelines.
 - (g) **Electronic Appendix:** All digital products that are requested (typically PDF maps) should be listed in an appendix and handed-in as part of an electronic submission.

7. Academic Regulations

Last VW date: March 20, 2024, for withdrawal without academic penalty. At least three assignments will be graded and returned prior to this date to provide feedback prior to the VW date.

Attendance: Regular attendance is expected of all students enrolled in this course. Please note the following penalty: a student may be debarred from class, laboratories, and examinations by action of the dean/director for persistent non-attendance, or failure to produce assignments to the satisfaction of the instructor. Attendance of all laboratories and completion of **all** laboratory assignments is required to achieve a passing grade. Note that a grade of “F” will be automatically awarded if all assignments are not completed.

Plagiarism: Plagiarism, cheating or impersonation in the completion of assignments, and at examinations, are very serious offences. Students caught plagiarizing on tests and laboratories may be debarred from class with further risk of academic penalty and possible expulsion. All graded work must be independent.

8. Outline of Topics Covered

Please note that this outline is subject to change without notice.

Topic	Textbook Pages
I. Introduction	
What is a Map	1-21
History of Mapping	Notes
GIS & Data Acquisition	23-42
II. Principles of Thematic Cartography	
Map Characteristics	43-60
Map Types	61-73
Map Design and Production	75-99
III. Geographic Framework	
Topography	101-145
Statistical Mapping	147-183
Mapping Time	187-197
IV. Maps at Work	
Presenting & Using Maps	199-214
Geovisualization	215-223
Decision support	225-238
V. Future of Cartography	

Schedule “A”

Section (a) Academic Supports

Writing and Learning Support: The Academic Learning Centre (ALC) offers services that may be helpful to you throughout your academic program. Through the ALC, you can meet with a learning specialist to discuss concerns such as time management, learning strategies, and test-taking strategies. The ALC also offers peer supported study groups called Supplemental Instruction (SI) for certain courses that students have typically found difficult. In these study groups, students have opportunities to ask questions, compare notes, discuss content, solve practice problems, and develop new study strategies in a group-learning format.

You can also meet one-to-one with a writing tutor who can give you feedback at any stage of the writing process, whether you are just beginning to work on a written assignment or already have a draft. If you are interested in meeting with a writing tutor, reserve your appointment two to three days in advance of the time you would like to meet. Also, plan to meet with a writing tutor a few days before your paper is due so that you have time to work with the tutor’s feedback.

These Academic Learning Centre services are free for U of M students. For more information, please visit the Academic Learning Centre website at:

<http://umanitoba.ca/student/academiclearning/>

You can also contact the Academic Learning Centre by calling 204-480-1481 or by visiting 201 Tier Building.

University of Manitoba Libraries (UML)

As the primary contact for all research needs, your liaison librarian (if they weren’t recently fired by Central Administration) can play a vital role when completing academic papers and assignments. Liaisons can answer questions about managing citations, or locating appropriate resources, and will address any other concerns you may have, regarding the research process. Liaisons can be contacted by email or phone, and are also available to meet with you

in-person. A complete list of liaison librarians can be found by subject:

<http://bit.ly/WcEbA1> or name:
<http://bit.ly/1tJ0bB4>.

In addition, general library assistance is provided in person at 19 University Libraries, located on both the Fort Garry and Bannatyne campuses, as well as in many Winnipeg hospitals. For a listing of all libraries, please consult the following: <http://bit.ly/1sXe6RA>. When working remotely, students can also receive help online, via the Ask-a-Librarian chat found on the Libraries’ homepage:

www.umanitoba.ca/libraries.

Section (b) Mental Health

For 24/7 mental health support, contact the Mobile Crisis Service at 204-940-1781.

Student Counseling Centre: Contact SCC if you are concerned about any aspect of your mental health, including anxiety, stress, or depression, or for help with relationships or other life concerns. SCC offers crisis services as well as individual, couple, and group counseling. *Student Counseling Centre:*

<http://umanitoba.ca/student/counselling/index.html>

474 University Centre or S207 Medical Services
(204) 474-8592

Student Support Case Management: Contact the Student Support Case Management team if you are concerned about yourself or another student and don’t know where to turn. SSCM helps connect students with on and off campus resources, provides safety planning, and offers other supports, including consultation, educational workshops, and referral to the STATIS threat assessment team.

Student Support Intake Assistant

<http://umanitoba.ca/student/case-manager/index.html>

520 University Centre
(204) 474-7423

University Health Service: Contact UHS for any medical concerns, including mental health problems. UHS offers a full range of medical

services to students, including psychiatric consultation.

University Health Service

<http://umanitoba.ca/student/health/>

104 University Centre, Fort Garry Campus
(204) 474-8411 (Business hours or after hours/urgent calls)

Health and Wellness: Contact our Health and Wellness Educator if you are interested in information on a broad range of health topics, including physical and mental health concerns, alcohol and substance use harms, and sexual assault.

Health and Wellness Educator

<http://umanitoba.ca/student/health-wellness/welcome.html>

Katie.Kutryk@umanitoba.ca

469 University Centre
(204) 295-9032

Live Well @ UofM: For comprehensive information about the full range of health and wellness resources available on campus, visit the Live Well @ UofM site:

<http://umanitoba.ca/student/livewell/index.html>

Section (c) Copyright Information

All students are required to respect copyright as per Canada's *Copyright Act*. Staff and students play a key role in the University's copyright compliance as we balance user rights for educational purposes with the rights of content creators from around the world. The Copyright Office provides copyright resources and support for all members of the University of Manitoba community. For more information:

<http://umanitoba.ca/copyright>

Section (d) Rights and Responsibilities

Your rights and responsibilities: As a student of the University of Manitoba you have rights and responsibilities. It is important for you to know what you can expect from the University as a student and to understand what the University expects from you. Become familiar with the policies and procedures of the University and the regulations that are specific to your faculty, college or school.

The [Academic Calendar](#)

<http://umanitoba.ca/student/records/academiccalendar.html> is one important source of information.

View the sections *University Policies and Procedures* and *General Academic Regulations*.

While all of the information contained in these two sections is important, the following information is highlighted.

- If you have questions about your grades, talk to your instructor. There is a process for term work and final **grade appeals**. Note that you have the right to access your final examination scripts. See the Registrar's Office website for more information including appeal deadline dates and the appeal form:

<http://umanitoba.ca/registrar/>

- You are expected to view the General Academic Regulation section within the Academic Calendar and specifically read the **Academic Integrity** regulation. Consult the course syllabus or ask your instructor for additional information about demonstrating academic integrity in your academic work. Visit the Academic Integrity Site for tools and support <http://umanitoba.ca/academicintegrity/> View the **Student Academic Misconduct** procedure for more information.
- The University is committed to a respectful work and learning environment. You have the right to be treated with respect and you are expected conduct yourself in an appropriate respectful manner. Policies governing behavior are included in the next section.

Section (e) Policies and Services Information

Respectful Work and Learning Environment

http://umanitoba.ca/admin/governance/governing_documents/community/230.html

Student Discipline

http://umanitoba.ca/admin/governance/governing_documents/students/student_discipline.html and,

Violent or Threatening Behaviour

http://umanitoba.ca/admin/governance/governing_documents/community/669.html

- If you experience **Sexual Assault** or know a member of the University community who has, it is important to know there is a policy that provides information about the supports available to those who disclose and outlines a process for reporting. The **Sexual Assault** policy may be found at: http://umanitoba.ca/admin/governance/governing_documents/community/230.html More information and resources can be found by reviewing the Sexual Assault site <http://umanitoba.ca/student/sexual-assault/>

Intellectual Property

- For information about rights and responsibilities regarding **Intellectual Property** view the policy: http://umanitoba.ca/admin/governance/media/Intellectual_Property_Policy_-_2013_10_01.pdf

Department Policies

For information on regulations that are specific to Environment and Geography, read the section in the Academic Calendar for the Department and on:

<http://umanitoba.ca/faculties/environment/departments/geography/index.html>

Contact an **Academic Advisor** within our faculty/college or school for questions about your academic program and regulations <http://umanitoba.ca/academic-advisors/>

Student Advocacy

Contact Student Advocacy if you want to know more about your rights and responsibilities as a student, have questions about policies and procedures, and/or want support in dealing with academic or discipline concerns.

<http://umanitoba.ca/student/advocacy/>

520 University Centre

204 474 7423

student_advocacy@umanitoba.ca