SUMMER INSTITUTE
ENVIRONMENTAL HEALTH

Instructor:	Terry Gratton, RS, MS, DrPH
Office:	CBH – 316
Appointment hours:	9AM – 4PM, Mon. – Fri.
Phone:	817/735·5140
Email:	tgratton@hsc.unt.edu

MISSION OF THE SCHOOL OF PUBLIC HEALTH:
The School of Public Health strives for academic excellence, research, and service in order to provide leadership in the application of public health principles that foster group and individual behaviors that prevent disease and promote health among diverse cultures in the local and global community.

ATTENDANCE AND DROP PROCEDURE:
The instructors and administration expect students to attend class. It is the responsibility of the student to consult with the instructor prior *to an absence if possible*.
Withdrawal from a course is a formal procedure that must be initiated by the student. Students who stop attending class and do not withdraw will receive a failing grade. Students should consult with the instructors prior to withdrawing. In some cases a perceived problem may be resolved, allowing the student to continue in class. It is the student's responsibility to be familiar with the policies and procedures of the School of Public Health as stated in the Student Handbook and Graduate School Catalog.

ACADEMIC ASSISTANCE:
All faculty are available for interactions with students by appointment, e-mail, and telephone. Academic assistance in the UNTHSC Office of Academic Support provides individualized tutoring at no cost to those students requesting tutoring.

HONOR CODE:
The University of North Texas Health Science Center's primary concern is the student. It attempts to provide for all students a college environment that is conducive to academic endeavor, social growth and individual self-discipline. Enrollment is considered implicit acceptance of the rules, regulations, and guidelines governing student behavior promulgated by the health science center and the Student Handbook (available in UNTHSC Office of Students Affairs or on the UNTHSC Web site) for which students are subject to discipline. Honor Code infractions by students constitute actions of dishonesty, cheating, plagiarism, stealing or lying to any school official. You should refer to the UNT Health Science Center regarding rules governing student academic conduct.

AMERICAN with DISABILITIES ACT
The University of North Texas Health Science Center does not discriminate on the basis of an individual's disability and complies with Section 504 and Public Law 101-336 (American with

Disabilities Act) in its admissions, accessibility, treatment and employment of individuals in its programs and activities

COURSE DESCRIPTION:
As one of the five core courses for a Masters of Public Health there are no prerequisites for this course. This course provides an overview of the physical, chemical, biological determinants that influence human health with an emphasis on understanding approaches to recognizing, evaluating and controlling environmental hazards. This course will cover urban water supply, wastewater disposal, air quality, solid and hazardous wastes, food protection, vector control, pesticides/toxicology, occupational safety and health, and risk assessment/risk communication, to provide a general understanding of how these areas relate to public health.

COURSE PURPOSE:
To introduce the student to the core concepts, basic terms, and fundamental principles used by environmental and occupational health professionals. On completion of this course, the student will have a general understanding of environmental determinants that affect human health.

COURSE OBJECTIVES & COMPETENCIES:
Objectives
This core course is intended to give public health students a basic understanding of:

1. The components that make up environmental health
2. How environmental factors impact the health of people and the community
3. The efforts made to prevent or minimize the effects of these factors
4. The scientific and technical foundations in the field
5. Practice of environmental health

Competencies
Upon completion of this course the student should be able to:

- Specify approaches for assessing, preventing and controlling environmental hazards that pose a risk to human health and safety.
- Describe the direct and indirect routes human, ecological and safety effects environmental and occupational agents.
- Specify current environmental risk assessment methods.
- Describe genetic, physiologic and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards.
- Discuss various risk management and risk communication approaches in relation to issues of environmental justice and equity.
- Explain the general mechanisms to toxicity in eliciting a toxic response to various environmental exposures.
- Describe federal and state regulatory programs, guidelines and authorities that control environmental health issues

LEARNING ENVIRONMENT:
The course will be conducted by means of lectures, guest lectures, site visits, and written reports.

TEXTBOOK:
Environmental Health: from Global to Local Howard Frumkin Ed. Jossey-Bass

COURSE REQUIREMENTS:

Participation and Discussion.

Participation assumes that the student has read the assignment prior to the lecture

- The student is expected to complete reading assignments *prior* to the class.
- Attendance is a part of the student's grade. The student is expected to attend all lectures including guest speaker presentations and field trips.

Written Assignments

All written assignments must be double-spaced with 1-inch margins and 12-point font, and follow American Psychological Association (APA) format, 5th edition, for text layout, citations and references.
LATE PAPERS, TESTS or ABSTRACTS WILL BE REDUCED ONE GRADE/DAY (A TO A-, A- TO B+, etc.).

Term Paper

The Term paper will be:

1. Double-spaced
2. 10 pages long, excluding bibliography
3. 12 point font Times Roman or Palatino
4. Name on every page, upper right-hand corner
5. Pages numbered, bottom right-hand corner
6. Single staple in upper left-hand corner – *no report covers*!

Your paper should explore the scientific basis of an environmental health issue or controversy affecting human health. Examples would be the current EPA proposals to lower allowable concentrations of ambient particulates, the effectiveness of radon mitigation strategies in homes, or the controversy surrounding bovine spongiform encephalopathy and the appropriateness of the measures taken to protect the European community. You are encouraged to be creative in your choice of a subject, and should consult with the instructor if you are unsure that you have an appropriate topic. The goal of this paper is for it to be a critical review of the topic, weighing the importance and correctness of the information from the various sources you identify, then arriving at a conclusion about the topic. Papers which reiterate the findings of another paper without critical review are appropriate for high school and some undergraduate courses, but are not what is expected of a graduate student.

A review of the appropriate scientific evidence and literature regarding the topic is essential. Select several papers from the current scientific literature that have a direct bearing on the problem you have selected and evaluate them. Issues such as study design, use of appropriate statistical methods, possible incomplete or missing data, and whether the findings adequately answer the question or proposed hypothesis should be addressed. Determine whether the authors draw the proper conclusions from the data they present, or whether other conclusions might be drawn. You should then explore the appropriateness, utility, and effectiveness of current or proposed regulation or actions concerning the topic. Consider if present policies for control or mitigation of hazards to health are adequate, and if not, suggest alternatives. Ethics of current situations/policies and their alternatives should be discussed. There must be evidence that you reviewed the appropriate scientific literature; a paper that contains references based only on internet websites or secondary literature (e.g. general interest magazines or newspapers) is not acceptable.

Abstracts

***INSTRUCTIONS FOR ABSTRACTS* (Research Article Write-ups)**

Choose an article from a **peer-reviewed journal** *that is about environmental or occupational health. If you're unsure about the type of article look at the chapter titles in the textbook for content or show me the article. Write your abstract using these 7 headings. Then describe the article in one sentence. Place you name in the upper right-hand corner of each page if you write more than one page.* Attach a copy of the article to your review.

Research Article Headings

Do not directly answer these questions. Use them as a means to discuss the heading.

TITLE:

Place the title of the article, author(s) and journal in APA format.

OBJECTIVE(S):

Use bullet points to describe aims and objectives
What was the study about?
What did the author(s) want to prove/show?

SUMMARY:

Describe the paper in a succinct paragraph.

METHODOLOGY:

What was the research method used?

CONCLUSIONS / RECOMMENDATIONS:

What conclusion(s) did the author(s) come to?
What were their recommendations?

APPLICATION TO PUBLIC HEALTH:

How can this study be applied to public health as you know it?

INTERPRETATION:

What did you think of the article?
What did you get out of reading this article?

Give a one sentence description of the article as it might appear in the background/introduction of another article.

Examinations:
There will be two examinations – a MID-TERM and a FINAL. Examinations will cover the reading assignments; materials presented through lectures, handout, class discussions, and guest speakers, and may include material found locally and/or on the Internet. Take home exam are due on the date indicated. Late papers will be reduced one grade/day (A to A-, A- to B+, etc.).

GRADING:	
Participation & Abstracts	10%
Mid-term examination	30%
Term Paper	30%
Final examination	30%

GRADES:	
95 – 100	A
90 – 94	A-
85 – 89	B+
80 – 84	B
75 – 79	C+
65 – 74	C

Summer Institute - Environmental Health (M – F 12:30 –3:30 PM)

	June	Lecture Topic	Readings/Notes
1	9	Introduction/ Population, Poverty, Pollution	1
2	10	Water Resources	18
3	11	Insect Disease Vectors	Dr. Lee **(Abstract due)**
4	12	Field Trip (Holly WTP)	*Wear comfortable shoes!*
5	13	Waste Water	18
6	16	Field Trip (Village Creek WWTP)	*Wear comfortable shoes!*
7	17	Environmental Law	Dr. Kaman
8	18	Food Quality & Safety	21
9	19	***MIDTERM***	
10	20	Solid & Hazardous Waste	19
11	23	Genomics and Public Health	6 Dr. Williamson **(Term paper due)**
12	24	Occupational Health	23 Dr. Lin
13	25	Air Pollution	14 Dr. Choi
14	26	Risk Communication	34 Dr. Choi **(Abstract Due)**
15	27	***FINAL***	**¡TEST!**

ABSTRACTS, and **TERM PAPERS** are due on the date indicated. Late exams and/or term papers will be reduced **ONE GRADE/DAY** unless you have made prior arrangements with me!

Term Paper

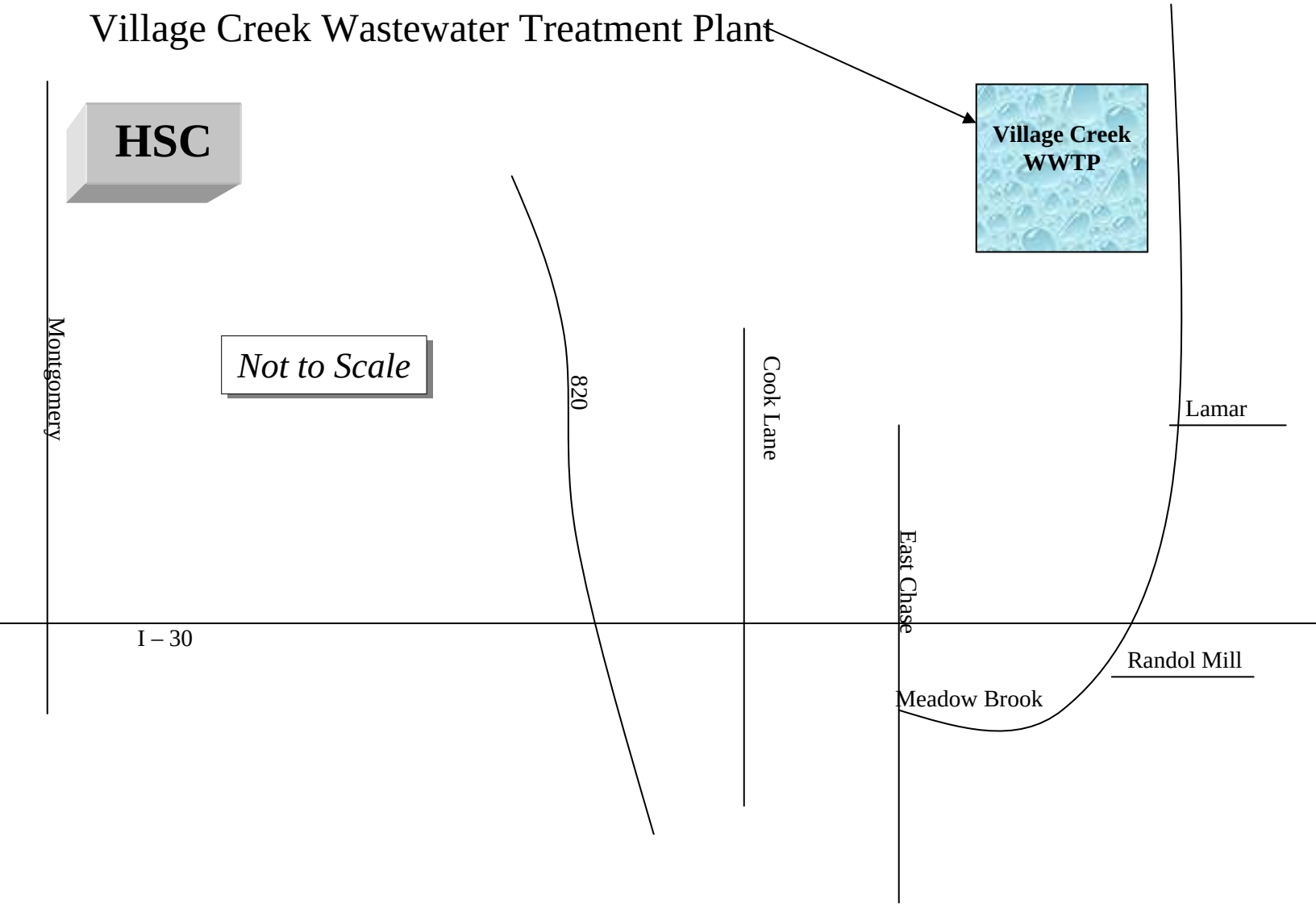
Name: _____

CRITERIA	**Possible Points**	**Points Given**
ORGANIZATION & STYLE		
Easy-to-Read – Flows	**5**	____
Correct length	**5**	____
Accurate spelling	**5**	____
APA format & style	**5**	____
Appropriate sentence structure	**5**	____
CONTENT		
Accurate information	**10**	____
Organization/Headings	**10**	____
Adequate/appropriate references	**10**	____
Sufficient breadth of coverage	**10**	____
Appropriate depth of coverage	**10**	____
Relevant discussion of the problem	**10**	____
Evaluation of the problem/issue	**15**	____
Total	**100**	____

Comments:

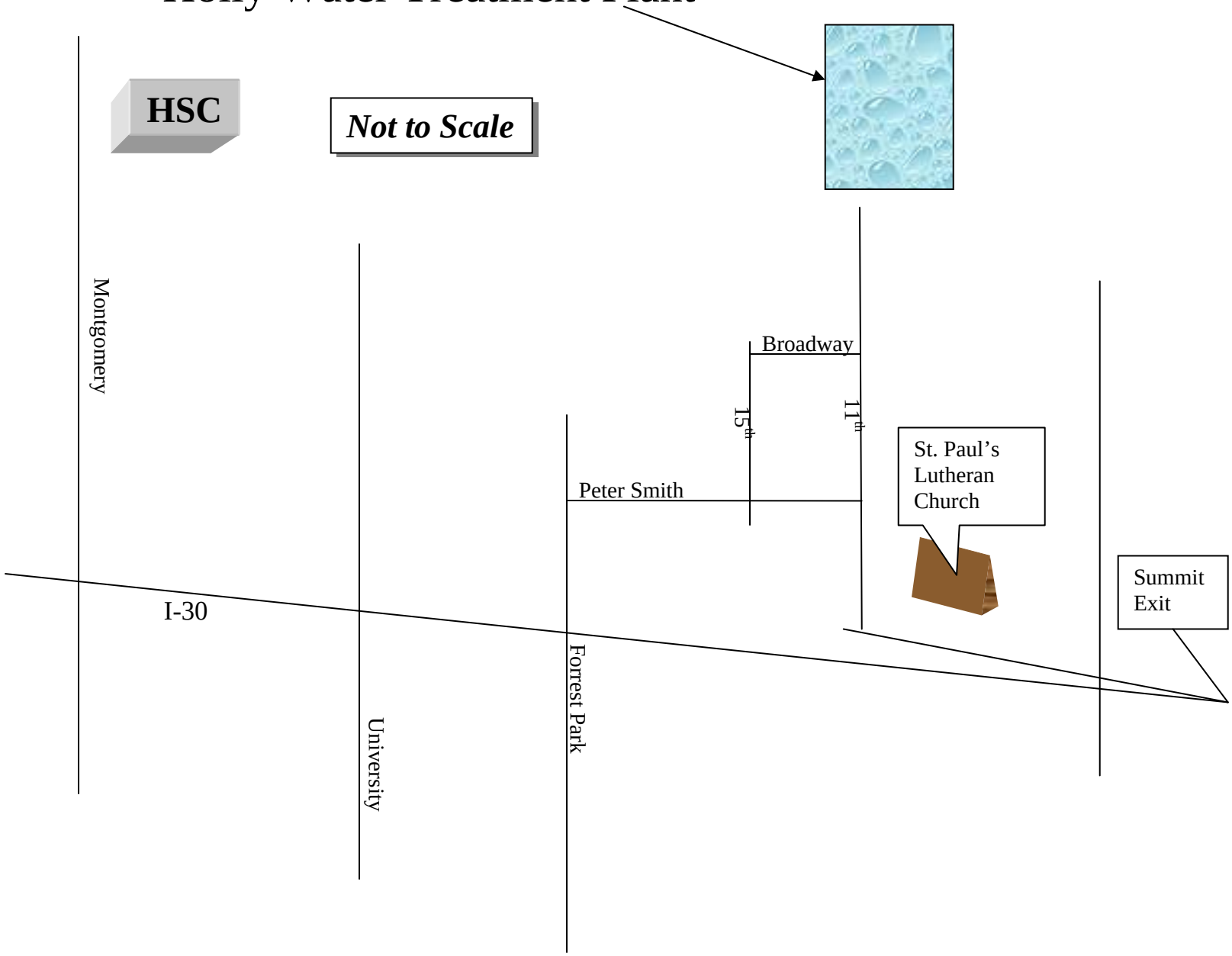
GRADE

Village Creek Wastewater Treatment Plant



From school take Montgomery south to I-30
Take I-30 east towards Dallas through downtown Fort Worth to East Chase Pkwy.
(East Chase Pkwy is the 2nd Exit after Loop 820)
Go south on East Chase to the 1st light - Meadow Brook.
Follow the road as it turns north. Go under the expressway.
Look for the light blue water tower *(this is the plant)*
Turn left into the plant; show your ID to the guard. Follow the road to the visitors' parking lot.
Go to the Administration building. We will meet in the CLASSROOM to the right as you walk in.
Wear comfortable shoes we will be walking about a mile some of it up a steep embankment.

Holly Water Treatment Plant



Enter the water treatment plant. Go straight ahead to the guard shack.
Show your Student ID/Texas ID or Texas drivers license to the guard.
Park your car where the guard tells you!
You'll see me there. Wait by the loading dock of the flash mix building.

Wear comfortable shoes. We will be walking about ½ mile