

**COURSE POLICY FOR BIOLOGY 285: HUMAN PHYSIOLOGY  
SPRING SEMESTER, 2013**

Course Description: 4 cr. Normal functions of organ systems in humans; fulfills the physiology requirements for biology, human development, nutritional sciences, and physical education majors and is recommended for students with pre-professional interests in medical or allied health fields. Three hrs lec, three hrs lab per wk. **Prerequisites: Biology 160 (zoology) or Biology 101 (general biology) and 1 semester of college Chemistry.**

**Lectures:** Dr. Jennifer Bray  
Room 239 TNR Building  
Ext. 3569

**Office hours:** Wednesday and Thursday from 10:00 – 12:00 and by appointment.

**Laboratories:** All in TNR 253. Instructors: Dr. Jennifer Bray (TNR 239, ext. 3569), Dr. Sol Sepsenwol (TNR 439, ext. 4256) and Ms. Pat Zellmer (TNR 237, ext. 3407) (See lab schedule, p. 7.)

**★You will need to buy a LAB MANUAL (\$10.00) from the Biology Sales Office (TNR 167) before your first lab next week! ★**

**Assigned Text:** "Human Physiology, From Cells to Systems," 8th ed., by Lauralee Sherwood; West Publishing Company, publisher, 2013. (Available at Text Rental.). Think about buying an old edition for your own reference after you take the course.

**Recommended Supplemental Text:** "Physiology Coloring Book," 2nd ed., 1999, by Wynn Kapit, Robert Macey and Esmail Meisami; Harper & Row publishers. (Contains excellent drawings and explanations not in textbook.) Available for purchase from the bookstore, \$21.00 (new) or \$16.50 (used).

**Examinations:** All 1-hour lecture examinations will be given on EVENINGS, **7:15-9:15 PM, in one of two rooms: Sections 1-5, Collins CC 101; sections 6-9, SCI D102, Final in CPS 116.** SEE THE FOLLOWING LECTURE SCHEDULE OR UWSP TIMETABLE FOR DATES. The material to be covered on each exam is shown on the lecture schedule. Alternate exam times will be available to those with **certifiable** job or class conflicts. Our exams take precedence over evening exams that are not listed in the timetable. Make-up exams will only be given if pre-arranged or in case of a *documented* emergency. There will be an *EXAM REVIEW* in **Collins CC 101, 7:15-8:15 PM**, before each exam. SEE LECTURE SCHEDULE OR TIMETABLE FOR DATES.

**Attendance Policy:** Attendance at lectures and laboratories is required.

**Last day to drop the course: Friday, April 5th.** (A "W" will appear on your transcript.)

**Grading Policy:** The examinations and labs will be weighted as follows:

<b>Exams I-IV</b>	<b>80%</b>
<b>Lab grade (total) ★★</b>	<b>20%</b>

★★ Lab grade consists of quiz grades, lab reports, lab paper, extra-credit lectures, and attendance. For details, see LAB POLICIES, p.6.

Any form of *cheating* on quizzes or exams will earn a grade of **F**. Student grievances are handled per the University of Wisconsin's administrative code, "**Student Academic Standards and Disciplinary Procedures**," found at <http://www.uwsp.edu/admin/stuaffairs/rights/rightsChap14.pdf>.

**Grade Scale:** Your grade will be based on a straight scale as shown below. There will be numerous extra-credit opportunities on exams and for lab. Grading decisions on borderline percentages will be made based on lab performance and attendance. There will be no negotiation of grades between instructor and students.

GRADE	MINIMUM PERCENT FOR GRADE
A+	97.0%
A	90.0%
A-	86.7%
B+	83.3%
B	80.0%
B-	76.7%
C+	73.3%
C	70.0%
C-	66.7%
D+	63.3%
D	60.0%
F	0.0%

The **A+** designation is called "honorary honors," which does not appear on your transcript, but which will be noted in letters of recommendation.

**Clickers:** This class uses "Clickers" to do interactive polling. You are required to lease a clicker for \$8 for the semester. This semester lease fee will be automatically added to your UWSP student bill. Clickers are available through UWSP's Help Desk, located in the basement of the LRC, room 023. For hours: <http://www.uwsp.edu/IT/helpdesk/index.aspx>. You will need your UWSP Student ID to lease a clicker. Your clicker may be used in any class that requires clickers for the semester. Clickers must be returned to the IT Help Desk before the end of finals. Students with unreturned clickers will be billed a late fee and/or may be billed the replacement cost of the clicker.

**Tutoring:** We will have at least two once-a-week **group tutors** for the course, available to anyone in this class, starting the third week of class (February 4<sup>th</sup>). See the Biology Department secretary in TNR 167 or a person in the Tutoring-Learning Center in the basement of the Library (018 LRC) for the necessary sign-up card. One-on-one tutoring is also available. This is a BARGAIN and, if pursued consistently, will help a lot!

**Lecture Slides:** Lecture PowerPoint presentations (in a condensed format) will be made available to registered students through the course link in *Desire to Learn* (D2L). Please note that lectures are only guaranteed to appear on D2L **after** each lecture is given, and students must recognize the content of these files **cannot** replace regular class attendance. Supplemental handouts may be provided during particular lectures.

**Suggestion:** Make a **LIST OF TERMS** from notes for each lecture and text assignment as a guide for day-to-day study. Take notes in lecture: research shows that writing notes by hand increases retention by 50%! Since Physiology does **not** lend itself to memorization very well, study the material as soon after *each* lecture as possible. Participation in a **study group** of three or four, meeting once a week is **the most effective way to study physiology**. Turn the lecture topics into questions; it's a great way to see how well you know the material.

**BIOLOGY 285: HUMAN PHYSIOLOGY  
LECTURE SCHEDULE, SPRING SEMESTER, 2013**

Dr. Jennifer Bray

Office: TNR 239, ext. 3569

Lectures: 9:00-9:50 am, Tues, Thurs & Fri (Collins Classroom Center 101)

**SUMMARY OF EVENING EXAMS AND REVIEWS:**

**EXAM 1: Thurs, Feb 21, 7:15-9:15 PM, Sections 1-5, Collins CC 101; sections 6-9, CPS 116 (covers material through lecture #11)**

**REVIEW I, Tues, Feb 19, 7:15-8:15 PM, Collins CC 101)**

**EXAM 2: Thurs, Mar 21, 7:15-9:15 PM, Sections 1-5, Collins CC 101; sections 6-9, CPS 116 (covers material through lecture #22)**

**REVIEW II, Tues Mar 19, 7:15-8:15 PM, Collins CC 101)**

**EXAM 3: Thur, Apr 18, 7:15-9:15 PM, Sections 1-5, Collins CC 101; sections 6-9, CPS 116 (covers material through lecture #33)**

**REVIEW III, Tues, Apr 16, 7:15-8:15 PM, Collins CC 101)**

**EXAM 4: Mon May 13, 8:00-10:00 am, Sections 1-5, Collins CC 101; sections 6-9, CPS 116 (covers material through lecture #45)**

**REVIEW IV, Thur, May 9, 7:15-8:15 PM, Collins CC 101)**

Lecture No.	Date	Topic	Recommended Reading: <i>Human Physiology</i> , 8th ed., 2013 by L. Sherwood
		★★ <i>Recommended: review of basic chemistry and physics</i>	<i>Appendix A; Bio 285 Lab Manual, Appx A &amp; B</i>
1.	<b>Jan. 22</b>	Introduction to physiology; organ systems	
2.	<b>24</b>	Cells as physiological systems; the cell membrane	Ch. 2 (22-29); Ch. 3 (57-64)
3.	<b>25</b>	Membrane permeability; passive and active transport; osmosis	Ch. 3 (65-79)
4.	<b>29</b>	Neurophysiology I: origin of nerve-membrane electrical potentials from dissolved ions	Ch. 3 (79-86)
5.	<b>31</b>	Neurophysiology II: excitable membranes, depolarization hyperpolarization, repolarization and action potentials in nerve and muscle cells.	Ch. 4 (90-105)
6.	<b>Feb. 1</b>	Neurophysiology III: synapses; the neuro-muscular junction, (motor end-plate)	Ch. 4 (105-109); Ch. 7 (249-255)
7.	<b>5</b>	Skeletal muscle I: mechanics and molecules of contraction	Ch. 8 (259-275)
8.	<b>7</b>	Skeletal muscle II: calcium-triggering system: the sarcoplasmic reticulum and t-tubule system	Ch. 8 (259-275)
9.	<b>8</b>	Skeletal muscle types, cardiac and smooth muscle types	Ch. 8 (278-283; 292-300)
10.	<b>12</b>	Motor nerves and muscle groups: motor units and origin of reflexes; basic anatomy of the central nervous system	Ch. 8 (274-275); Ch. 5 (figs. 5-10, 5-11, 5-15, 5-19, 5-20, 5-24-26)
11	<b>14</b>	Autonomic nervous system	Ch. 7 (240-249)

===== **END OF MATERIAL COVERED ON EXAM #1** =====

12.	15	REFLEXES	Ch. 5 (179-182) + handouts
13.	19	REFLEXES	
<b>RVW #1</b>		<b>REVIEW #1, Tues, Feb 19, 7:15-8:15 PM, Collins CC 101</b>	<b>LECTURES 1-11</b>
14.	21	The erythron: the red blood cell forming system; anemia	Ch. 11 (390-397)
<b>EXAM #1</b>		<b>EXAM #1, Thurs, Feb 21, 7:15-9:15 PM, Sections 1-5, Collins CC 101; sections 6-9, CPS 116</b>	<b>LECTURES 1-11</b>
15.	22	Hemostasis: blood coagulation and platelet function	Ch. 11 (404-410)
16.	26	White blood cells: the granulocytes and lymphocytes; leukemias & treatments	Ch. 11 (399-404)
17.	28	Immunology: macrophage & lymphocyte function; humoral and cellular immunity	Ch. 12
18.	Mar. 1	Properties of arteries and veins, vascular disease; special circulations: lung, heart, brain, muscle, skin	Ch. 10 (fig 1, tbl 10-1) Ch. 9 (334-340)
19.	5	Cardiac Physiology I: heart as a muscular pump	Ch. 9 (305-310)
20.	7	Cardiac Physiology II: the EKG; blood pressure patterns	Ch. 9 (311-322)
21.	8	Cardiac Physiology III: the cardiac cycle	Ch. 9 (322-326; Fig 9-16, p.323)
22.	12	Blood flow and blood pressure relationships	Ch. 9 (Figs. 9-1 & 2). Ch. 10 (344-380; fig 10-14)

===== END OF MATERIAL COVERED ON EXAM #2 =====

23	14	Control of cardiac output and blood pressure; congestive heart failure (CHF) and <i>cardiovascular shock</i>	Ch. 10 (340-380) Ch. 9 (332-334) Ch. 10 (380-385)
24.	15	Pulmonary Physiology I: Mechanics of respiration	Ch. 13 (457-484)
25.	19	Pulmonary Physiology II: Chemistry of respiration, Hb and carbonic anhydrase	Ch. 13 (484-491)
<b>RVW #2</b>		<b>REVIEW #2, Tues Mar 19, 7:15-8:15 PM, Collins CC 101</b>	<b>LECTURES 12-22</b>
26.	21	Pulmonary Physiology III: nervous and chemical control of respiration; CO poisoning; respiratory disease (emphysema)	Ch. 13 (491-501; 483 for emphysema)
<b>EXAM #2</b>		<b>EXAM #2, Thurs, Mar 21, 7:15-9:15 PM, Sections 1-5, Collins CC 101; sections 6-9, CPS 116</b>	<b>LECTURES 12-22</b>
27	22	Renal Physiology I: regulation of body fluids; lymphatic system; gross and micro-anatomy of the kidney	Ch. 10 (368-370); Ch. 14 (505-510)
28	Apr. 2	Renal Physiology II: filtration, GFR, reabsorption, counter-current multipliers	Ch. 14 (511-518)
29.	4	Renal Physiology III: fluid and acid-base balance	Ch. 15 (556-562); Ch. 15 (563-578)
30	5	Renal Physiology IV: role of the hormones aldosterone and ADH in the regulation of water excretion/blood volume.	Ch. 14 (518-523)
31	9	Gastrointestinal physiology I: anatomy & basic function.	Ch. 16 (Tbl 16-1)
32.	11	Gastrointestinal physiology II: digestion and assimilation of foodstuffs	Ch.19 (704-708) Fig 17-2;Ch.16 (Tbl 16-1)

===== END OF MATERIAL COVERED ON EXAM #3 =====

33.	12	Gastrointestinal physiology III: release of energy from absorbed foodstuffs; basic biochemistry; starvation and gluconeogenesis	Ch.19 (704-708) Fig 17-2;Ch.16
34	16	Regulation of blood glucose: insulin and diabetes-I & II	Ch. 19 (708-720)
<b>RVW #3</b>		<b>REVIEW #3, Tues, Apr 16, 7:15-8:15 PM , Collins CC 101</b>	<b>LECTURES 23-33</b>
35	18	Regulation of body temperature; role of the hypothalamus	Ch. 17 (645-653)
<b>EXAM #3</b>		<b>EXAM #3,Thur, Apr 18, 7:15-9:15 PM, Sections 1-5, Collins CC 101; sections 6-9, CPS 116</b>	<b>LECTURES 23-33</b>
36	19	<u>Introduction to endocrinology control systems</u> : the pituitary gland -- the "master" endocrine gland.	Ch. 18 (662-671; fig 18-1; Tbl 18-2 summary, p. 662-663)
37	23	The hypothalamus-pituitary team, using the control of the thyroid gland as a model system	Ch. 19 (686-692)
38.	25	Adrenal gland I: anatomy, steroid hormones, epinephrine and pituitary control	Ch. 19 (692-704)
39.	26	Steroid hormones of the adrenal gland II: Adrenal diseases: [most in handouts] Cushing's syndrome (excess glucocorticoids); Addison's disease (low GC's) and the adrenogenital syndrome (excess adrenal androgens)	Ch. 19 (692-704) + handouts
40.	30	Sex determination and sex differentiation: sex is not all in the genes	Ch. 20 (736-743)
41	5/2/2012	Female sex-steroid hormones: estrogen, progesterone and the menstrual cycle	Ch. 20 (757-771)
42	3	Endocrinology of pregnancy (hCG, and others); fetal physiology	Ch. 20 (773-785)
43	7	Parturition and lactation (prostaglandins, hCS, oxytocin, prolactin and others)	Ch. 20 (785-792)
44.	9	Male reproductive endocrinology	Ch. 20 (743-754)
<b>RVW #4</b>		<b>REVIEW #4, Thur, May 9, 7:15-8:15 PM , Collins CC 101</b>	<b>LECTURES 34-45</b>
45.	10	special topics in reproduction	(lecture only)
<b>EXAM #4</b>		<b>EXAM #4 (Final) , Mon May 13, 8:00-10:00 am, Sections 1-5, Collins CC 101; sections 6-9, CPS 116</b>	<b>LECTURES 34-45</b>

===== END OF MATERIAL COVERED ON EXAM #4 =====

<b>HUMAN PHYSIOLOGY LABORATORY POLICIES</b>
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LAB DAY	SECTION	INSTRUCTOR
MAM (11am-2pm)	Section #3	Dr. Sepsenwol
MPM1 (2pm-5 pm)	Section #5	Dr. Sepsenwol
MPM2 (5pm-8pm)	Section #9	Ms. Zellmer
TPM1 (1pm-4pm)	Section #6	Dr. Bray
TPM2 (4pm-7pm)	Section #2	Ms. Zellmer
WAM1 (8am-11am)	Section #1	Ms. Zellmer
WAM2 (11am-2 pm)	Section #4	Dr. Sepsenwol
WPM1 (2pm-5pm)	Section #7	Dr. Bray
RPM (2pm-5pm)	Section #8	Dr. Bray

**Lab Quizzes and Weekly Reviews:** There will be a short lab quiz at the beginning of each lab period covering the results of the last week's lab and the procedures for the current lab. Unless there is an excused absence, missed lab quizzes cannot be made up. If you miss a lab you can schedule another lab during the same week with the instructor of that lab. There will be no lab questions on lecture exams.

**Extra-Credit Lab Paper** (for **Dr. Sepsenwol's sections only**): a paper, based on material from the course, will consist of an introduction to the physiology required to understand the topic and a discussion of the specialized topic itself. The topic must be approved by Dr. Sepsenwol. Directions are at the end of this handout. The paper deadlines are published in the lab schedule following.

**Extra-Credit Lectures:** at least two extra-credit lectures will be offered this semester, times to be announced. These will be invited speakers to UWSP whose topics might be of interest to Human Physiology students. Each will be worth 5 extra-credit lab points. You can get lab credit for two (+10 pts). With extra-credit points, it is quite possible to earn more than 100% in lab (although only 100% will be credited toward your final grade in the course). **DO NOT PASS UP EXTRA-CREDIT LAB OPPORTUNITIES!** It can mean a big difference in your grade.

**Lab Grade:** the lab grade consists of **quiz grades, lab reports, lab paper, extra-credit lectures**, and **attendance**. **It counts 20% of the final grade.** Think of your lab grade as an extra lecture exam.

**BIOLOGY 285 HUMAN PHYSIOLOGY LAB SCHEDULE****SPRING SEMESTER, 2013**

**LAB MANUALS ARE AVAILABLE FOR \$10.00 FROM THE SALES OFFICE, TNR 167.  
YOU WILL NEED ONE TO BEGIN LAB NEXT WEEK!**

Instructors: Dr. Jennifer Bray (TNR 239, ext. 3569), Dr. Sol Sepsenwol (TNR 439, ext. 4256) and Ms. Pat Zellmer (TNR 237, ext. 3407)

<b>LAB BEGINNING:</b>	<b>EXPERIMENT DESCRIPTION:</b>	<b>LAB MANUAL PAGES:</b>
January 28	ANATOMY OF THE PRESERVED RAT	25-28
February 4	PERMEABILITY: PENETRATION OF SUBSTANCES INTO CELLS	29-42
February 11	THE SPECIAL SENSES: HEARING, TOUCH, TASTE & SMELL Introduction to the BIOPAC software [ <b>Lab Paper</b> , Sepsenwol sections only: <b>TOPICS</b> due this Friday, 5 pm]	57-70
February 18	PROPERTIES OF SKELETAL (STRIATED) MUSCLE	71-82
February 25	SPINAL AND SUPRASPINAL REFLEXES	43-56
March 4	FORMED ELEMENTS OF THE BLOOD; RED BLOOD CELL MEASUREMENTS [ <b>Lab Paper</b> , Sepsenwol sections only: <b>SUB-TOPIC LIST &amp; REFERENCES</b> due this Friday, 5 pm]	83-94
March 4	IMMUNITY AND BLOOD TYPING	95-100
March 11	HEART ANATOMY AND THE ELECTROCARDIOGRAM	101-116
March 25	★★★★ <b>SPRING BREAK, NO LAB</b> ★★★★★	
March 18	HEART (VALVE) SOUNDS AND BLOOD PRESSURE	117-132
April 1	CAPACITIES OF THE RESPIRATORY SYSTEM	133-140
April 8	KIDNEY PHYSIOLOGY: WATER-, ELECTROLYTE- AND pH-BALANCE	141-152
April 15	★ SMALL-ANIMAL SURGERY PRACTICE AND PREPARATION	153-156
April 22	HORMONE-DEPENDENT TISSUE GROWTH, PT. I: GONAECTOMIES OF MALE & FEMALE RATS	157-162
April 29	THYROID HORMONES AND METABOLISM: SOLVING A HORMONE "UNKNOWN"	163-168
May 6	HORMONE-DEPENDENT TISSUE GROWTH, PT II: CASTRATION EVALUATION	169-176
May 10 (tentative)	<b>OPTIONAL: TOUR OF ST. MICHAEL'S HOSPITAL</b> (see sample questions in lab manual). This gives you a chance to hear physiology spoken. Usually includes the following departments: Intensive Care, Hemodialysis, Clinical Chemistry, Pathology, and Obstetrics & Birthing Center.	177-178

**Lab Sections:**

LAB DAY	SECTION	INSTRUCTOR
MAM (11am-2pm)	Section #3	Dr. Sepsenwol
MPM1 (2pm-5 pm)	Section #5	Dr. Sepsenwol
MPM2 (5pm-8pm)	Section #9	Ms. Zellmer
TPM1 (1pm-4pm)	Section #6	Dr. Bray
TPM2 (4pm-7pm)	Section #2	Ms. Zellmer
WAM1 (8am-11am)	Section #1	Ms. Zellmer
WAM2 (11am-2 pm)	Section #4	Dr. Sepsenwol
WPM1 (2pm-5pm)	Section #7	Dr. Bray
RPM (2pm-5pm)	Section #8	Dr. Bray

Dr. S. Sepsenwol  
Biology 285: Human Physiology  
January 18, 2013

**HUMAN PHYSIOLOGY LAB PAPER**  
**( Dr. Sepsenwol's sections only)**

*Summary of deadlines for paper:*

*Main Topic approval: **Friday, Feb 1, 5:00 pm, 5 PM**, in TNR 439..*

*Specialized terms list and references submission: **Friday, March 1, 5:00 pm, 5 pm** in TNR 439.*

*Final deadline for turning in paper: **Friday, April 12, 5:00 pm, 5 pm** in TNR 439.*

1. The lab paper is *optional* for Dr. Sepsenwol's sections. It will add up to *10 extra-credit points* to your lab total.

**PURPOSE:** The purpose of this paper is to select a topic that is interesting to *you* and *relates to the Physiology lecture course and/or lab*. Topics can be on (a) *normal conditions* that require physiology to understand (for example, how the heart and respiratory systems respond during deep-water diving) or (b) on the *effects of drugs or natural substances* on physiology (for example, how different types of diuretics work and how they are used) or (3) on how the effects of *disease* can affect normal physiology (for example, how the normal functions of the motor-control centers of the brain are affected by Parkinson's Disease). We have had excellent papers on diseases suffered by family members, friends or the writer him/herself, sports-related injuries or illnesses, the physiology of specialized training regimens, specialized aspects of birth, nursing, heart function.

**AUDIENCE FOR PAPER:** You are writing this paper to an audience of *college students that have already had Biology 285*; in other words, who have had all the information that is presented in the course.

**MAIN TOPIC:** A **main topic** for your paper must be approved by Dr. Sepsenwol, **Friday, Feb 1, 5:00 pm**. The topic cannot be general ("vision," "diabetes," "training for sports"); it must be specific ("macular degeneration," "diabetic retinopathy," "creatine supplementation"). I'll be glad to help you narrow down your main topic and suggest some sources. Just see me in lab or sign up to see me at my office.

**TOPIC'S SPECIALIZED TERMS LIST AND REFERENCES:** A **specialized terms list and references** for the paper must be submitted to Dr. Sepsenwol by **Friday, March 1, 5:00 pm**; email is OK. A **specialized terms list** is a list of **specific** topics to be covered in your paper. Do some reading on your topic, so you know what should be in the paper; this is the foundation for the specialized terms list. If it's a disease, start with the **MERCK MANUAL** in the reference room at the Library. (See below.) A general list like, "discussion of symptoms," "what it is," etc. is not acceptable for a sub-topic list. It should be **detailed** (e.g., "types of insulins," "diabetic retinopathy," "diagnostic signs of diabetic kidney failure: high blood pressure..."), but does not have to be organized in any way. This is to show that you have done some preliminary research on the topic and know what you want to write about. **You will also include a list of at least 4 references that you have looked at** (one may be your textbook). See the section below on "Sources of information." If the topic is a disease, you can use an **interview with a patient** as a reference.

**THE FINAL PAPER:** The paper is due **Friday, April 12, 5:00 pm** under my office door, TNR 439. **Paper Length:** 8 pages, double-spaced, with not more than 1" margins, Title page, references and illustrations do not count in total. How to write the paper is on the next page.



## FORMAT OF PAPER

- I. **INTRODUCTION:** Why are you writing about the topic? Is it related to you or a friend or relative? Something you read? Something related to your professional interests? Use a story or experience to bring the reader into your topic.
- II. **BASIC PHYSIOLOGY REQUIRED TO UNDERSTAND YOUR SPECIAL TOPIC:** Provide the basic physiology and anatomy background from lecture and/or your human physiology text. Include relevant lab experiments.
- III. **DISCUSSION OF SPECIAL TOPIC:** This is the main part of the paper and applies principles of physiology covered in Biology 285 (discussed above) to understanding the special topic. This is meant for a college-level audience, people who have had Biology 285.
- IV. **RELEVANCE TO PERSONAL OR PROFESSIONAL INTERESTS.**
- V. **REFERENCES USED. YOU MUST USE AT LEAST TWO TEXT OR JOURNAL REFERENCES** (in other words, references that are **NOT** from the Internet). Include books, journals (look for *review articles*) and interviews. **Interviews:** you might want to *interview* a person who suffers from a disease to get a specific view of what it's like, how it started, how it was diagnosed, what treatment is like, etc. You can also interview other experts, like a doctor or nurse or trainer or even professor that deals with your special topic on a daily basis.) Your textbook is an appropriate reference. Also, the **UWSP library now has an up-to-date collection of medical references** (textbooks in physiology, pathology, immunology -- all the basic references found in a medical library). You will need to know what reference to look for; ask me if you have trouble finding one. **Do not use references older than 2000.**

### Sources of Information

- A. **Your textbook:** Sherwood's "Human Physiology, 8th ed." has a lot more information than we can cover in lecture and is a good source for a basic understanding of your topic. It also has excellent illustrations you may be able to use in your paper.
- B. **Library references:** There is a very good starting place for topics in human disease at the UWSP library: **The Merck Manual, 17th edition.** This lists, in condensed form, almost all diseases known to mankind. There is also a **collection of up-to-date advanced texts in physiology, pathology, biochemistry, cell biology and all areas of medicine (surgery, dermatology, etc.).**
- C. **Me.** Talk to me. My appointment sheet is posted next to my door, TNR 439. Weekly sheets are posted for the entire semester. I can lead you to useful references.
- D. **The Internet.** The best Internet starting place for information on *diseases or medical conditions* is "**Medline Plus**" from the National Library of Medicine, part of the National Institutes of Health, <http://www.nlm.nih.gov/medlineplus/healthtopics.html>.  
The diseases are listed alphabetically, and include patient information, drugs, on-going research and links to other sites.
- E. For a large listing of journal articles about a particular topic, you can try the **National Library of Medicine "Medline" database:** You can save references and abstracts directly to **MyFiles H:\ drive** on the network. Use **Medline** database from any campus computer: <http://www.ncbi.nlm.nih.gov/PubMed/>  
In the inquiry box that appears, use a string of key words to locate the best articles. The full title of each article appears, most recent, first. Don't look up individual research articles -- they are too specific and you will be wasting your time. Click on the **"REVIEW"** tab. These are all the reviews of the topic you are looking for, and summarize all the current literature on the subject. You can read the abstracts of the

interesting ones. At the end of each abstract, there is a **SAVE** button to save the abstract to your **MyFiles H:\ drive**, found in My Documents. ("**SAVE** the above report in \_\_\_\_\_format"). Choose **PC** for format and save to your H:\ drive, under My Documents. For a paper copy only, just hit printer icon on screen.

If the library doesn't have the journal, you will need to request the article from UWSP's **Interlibrary Loan** online <http://library.uwsp.edu/depts/ill/ill.htm>. It takes about a week to get the article.

References should be put into the following form for your paper:

**FOR JOURNAL ARTICLES:** Author(s) Name(s). Year. "[title of article or book]", Title of Journal, pages.

Example:

J.L. Marcus. 1992. "Porphyrias and vampirism," J. Gen. Psychiatry, 2188-2190.

**FOR BOOKS:** Author(s) Name(s). Year. "[title of chapter used]", in [title of book], [editors], Publisher, pages. Example:

P.N. Nobble and A.J. Flom. 1991. "Hemoglobin variants and disease," in Hematology, Canby and Canby, eds., McGraw-Hill, 191-201.

**FOR WEBSITES:** **Author** (if known), **sponsoring organization** (university, agency, etc.), "**title of web page**", web address (=URL), **last update** (usually at bottom of page). The easiest way to do this is to go to the site => click on the address box of the browser to highlight all of it => click on **EDIT => COPY**. Go to the reference page of your paper and click on **EDIT => PASTE**. For your own safety, save the web page to your H:\ drive as follows: **FILE => SAVE AS** . Then go to "**Save As type:** " box and look for "**Web Archive single file (\_\_\_\_.mht)**", then click "**Save**" button. This puts all the pictures and text on the web page into one file. Example:

Mayo Clinic, "Dengue Fever," <http://www.mayoclinic.com/health/dengue-fever/DS01028> , last updated: September 2009.