University of Wisconsin-Madison Physics 321 – Electric Circuits and Electronics — Fall 2023

Course Instructor:

Dan McCammon <u>mccammon@physics.wisc.edu</u>, 608-262-5916, 6207 Chamberlin Hall Office Hours: **5:30-6:30 Mondays -** 6207 Chamberlin, can move to 6242 Chamberlin

Laboratory Instructors:

sections 301 and 304

sections 302 and 303

Robin Chisholm wschisholm@wisc.edu

12:00-1:00 Wednesdays in 3119a Ch.

Joshua Doucette jddoucette@wisc.edu Office Hour: 5:30 Tues &Thurs in 3119a Ch.

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Lectures: B239 Van Vleck

Tue/Thu 11:00AM-12:15PM.

Main text: "Introduction to Modern Electronics", J.C. Sprott (spiral-bound xerox copies at UW bookstore ~\$30; used hardcover online: varies \$3. – \$600; good pdf on our website)

Supplemental:

<u>https://www.allaboutcircuits.com/textbook/</u> (on-line text: verbose with lots of diagrams). "The Art of Electronics", P. Horowitz and W. Hill (on reserve PMA Library: Advancedlevel book on practical circuits. Very useful when designing your own.)

Labs:

3119A Chamberlin Hall Section 301: Tuesdays 2:25PM - 5:25PM Section 302: Tuesdays 7:00PM - 10:00PM Section 303: Wednesdays 2:25PM - 5:25PM Section 304: Thursdays 2:25PM - 5:25P

Exams:

Midterm exam #1: Thursday, Oct. 5 (in class) Midterm exam #2: Thursday, Nov. 9 (in class)

Homework: Homework should be turned in at the beginning of class Thursday (e.g. HW1 is due 9/14). Solutions will be handed out when the homework is turned in, so late homework can be accepted only with an approved excuse. (Turn it in early if you must miss a Thursday class. It can be left in Dan McCammon's mailbox on the 2nd floor of Chamberlin before 10:00 am.) Working together is strongly encouraged, but turn in your own work.

Grading: Labs 40%, Exams 45%, Homework 15%. Final has double weight of a midterm. Will drop your lowest midterm or half the weight of the final. Scale: $90^{A}=AB$, $70^{A}=B$, $60^{A}=BC$, $50^{A}=C$, $40^{A}=D$. No curve. Everyone can get an A. Study together. **Come to office hours**, these are used as a discussion session.

Course Website: https://www.physics.wisc.edu/courses/home/fall2023/321/

The course website includes: homework assignments, laboratory writeups, pre-lab worksheets, assorted handouts you should read, and instruction manuals for the various laboratory instruments you will be using.

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Wk	Home work	Tuesday	Topics	Thursday	Topics	Reading	
1		9/6 (No Lab)	No class	9/7	DC Voltage and Current, Ohm's Law, Sources	1.1-1.5; 1.6	
2	HW1	9/12 (Lab 1)	Kirchoff's Laws, Linearity	9/14	Linear Circuit Theorems	1.7; 2.1-2.6	
3	HW2	9/19 (Lab 2)	Inductors, Capacitors, Transient Analysis	9/21	AC Circuits, Time Domain	3.1-3.8	
4	HW3	9/26 (Lab 3)	AC Circuits, Frequency Domain	9/28	LCR circuits	4.1-4.4	
5	HW4	10/3 (Lab 4)	Filters, Transformers	10/5	Midterm Exam #1	4.5-4.8;	
6	HW5	10/10 (Lab 5)	Fourier Analysis	10/12	Fourier Analysis, Transmission Line	5.1-5.6	
7	HW6	10/17 (Lab 6)	Intro. to p-n Junctions	10/19	Diode Applications Junction FETs	6.1-6.3, 6.4-6.9*, 7.7-7.9	
8	Х	10/24 (Lab 7)	Bipolar Transistors	10/26	Transistor Amplifiers	8.1-8.8	
9	HW7	10/31 (Lab 8)	Transistor Amplifiers; Intro. Operational Amplifiers	11/2	Applications of Ideal Op-Amps	9.1-9.5	
10	HW8	11/7 (Lab 9)	Negative Feedback with Finite Gain	11/9	Midterm Exam #2	9.6-9.9	
11	HW9	11/14 (Lab 10)	Positive Feedback and Oscillators, Non-Ideal Op-Amp Characteristics	11/16	Binary Numbers and Boolean Algebra	10.1, 10.6*, 11.1-11.3	
12	Х	11/21 (No lab.)	Logic Circuits, Adders	11/23	No class (Thanksgiving)		
13	HW 10	11/28 (Lab 11)	Flip- flops	11/30	Intro. to SPICE	11.5, Handout	
14	HW 11	12/5 (Lab 12)	Counters and Registers, Multipliers	12/7	MOSFET Scaling and Moore's Law	11.6	
15		12/12 (No Lab)	Review and Discussion	12/14	No class	*can just skim section	
	FINAL EXAM Tuesday December 19 th 10:05 – 12:05						

Laboratory Syllabus

Writeups for the laboratory experiments are available on the course website. I will have some printed copies available in lecture the week before, and you are welcome to take one if it is not easy for you to download and print your own copy. The corresponding pre-lab worksheet should be completed **before** attending the lab session.

The laboratory portion of the course consists of the 12 experiments listed in order below:

- 1. DC Instruments and Measurements
- 2. DC Circuit Theorems
- 3, Bridge Circuits
- 4. The Oscilloscope
- 5. Fourier Analysis of a Square Wave
- 6. Filter Circuits
- 7. Diode Characteristics and Circuits
- 8. Bipolar and Field Effect Transistor Characteristics
- 9. Single-Transistor Amplifiers
- 10. Linear Op-Amp Circuits
- 11. Digital Logic Circuits
- 12. Digital Flip- flop circuits and Applications

The experiments are done one per week in a three-hour laboratory period. You will need a bound lab notebook for recording and analyzing your experimental results. The lab book should be a spiral-bound, quad-ruled 8-1/2" x 11" or larger notebook with at least 70 sheets. The recommended notebook is the Ampad #22-157 11-3/4" x 9-1/4" Computation Book or equivalent. These are more expensive than smaller notebooks, but a good investment: they will lie flat to write in, the pages are large enough to attach a full sheet of paper, and the pages are pre-numbered. You will need to number all pages used if they do not come that way. This lab notebook is not to leave the laboratory for the duration of the semester. Your name and laboratory section should be written on the front cover. Leave the first couple pages blank for a table of contents that need only include the experiment name and its starting page number. Sketches, diagrams, and simple graphs may be drawn directly in the notebook. More detailed graphs can be plotted using a computer, printed out, and taped, glued or stapled into your notebook. Each item should be attached to the notebook page on all four edges: do not "stack" anything. You will need a good calculator. You are expected to do the lab work during your scheduled lab period, handing in your completed lab notebook at the end of the period. Only under special circumstances, such as an illness, job interview or necessary travel, will you be allowed to do the lab at a time different from your scheduled time. Send an email to the course instructor, your TA, and your lab partner as soon as you know you will miss the lab. Except in case of illness, this should be sent well ahead of the lab. Make sure you come to the lab with a copy of the lab writeup. The time in lab will pass quickly and you may be hard pressed to complete many labs within the 3 hours provided. Come prepared! The lab writeup should be read and studied before you come into the lab.

For most labs there will be a worksheet that you **must complete prior to the laboratory period and turn in at the beginning of the laboratory**. These are identified as "pre-lab worksheets" and form part of your laboratory grade.

Lab Notebooks and Grading

Lab notebooks are to be kept in the style of a research notebook. No formal reports are required, but several points are worth emphasizing:

- 1. Your lab notebook should be **organized**. The lab notebook should be self-contained. In other words, it should be possible for another person to read your notebook and be able to understand what you did, **without reference to the experiment writeup**. If it will save time to include something from the experiment directions, cut it out and attach it in the notebook at the appropriate point. Glue or tape all inserts securely in a single layer. Nothing 'underneath' will count, so don't put it there.
- 2. The notebook should contain a brief header on each section that says what you're trying to do below. All circuit diagrams relevant to a particular part of the experiment should be neatly drawn, and all necessary calculations shown. Again, you can paste in a copy of a relevant portion of the pre-lab to save time.
- 3. It is important to draw circuit diagrams before building the circuit. You can label points on the diagram where voltages or currents are measured and use these labels to easily and accurately identify recorded data.
- 4. Again, be sure, at least once on each page, to have a short sentence stating what you are trying to do in the part that follows.
- 5. Read and follow the suggestions on tabulating data and plotting graphs which are given in the appendix. Make sure you tape, glue or staple all the graphs, relevant to a part of the experiment to the page that contains work for that part. If this is not possible, provide page references in both directions. **Pages must be numbered**.
- 6. **Try to keep things in chronological order**. This should be relatively easy if you write everything down as you do it and do the analysis for each part as you take the data. If you need a backward or forward reference to show where a number comes from, include the page number.
- 7. Reserve a couple of pages at the beginning of the notebook for a **table of contents** with page number references to the beginning of each lab.

Each laboratory will have a pre-lab worksheet. These worksheets together count as part of your laboratory score. If you want me to score your worksheet you must turn it in at the beginning of your laboratory. If you are excused from a laboratory (medical, job interview, other valid reason), your worksheet will be due the next laboratory.

Each laboratory will be graded on a 10-point scale. The following factors will be considered:

- 1. Was the pre-lab worksheet completed and correct prior to the start of the laboratory?
- 2. Is the laboratory write-up neat, well-organized, self-contained, and understandable?
- 3. Are all circuit diagrams included?
- 4. Were the measurements done carefully, and are the results reasonably accurate?
- 5. Are the tables and graphs well organized and contain all relevant information?

6. Have you explained how the various quantities were measured and shown how the analysis was done?

7. Are the conclusions briefly and clearly stated?

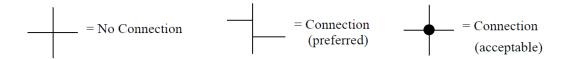
8. Was the entire laboratory completed? This has lower weight than the other considerations above. The course load is calculated to allow time for you to spend preparing for the lab before you come, and if you are well-prepared, you should be able to finish it in the allotted time. But it is more important to do things right and have them properly recorded and analyzed in you notebook than to finish all parts. You should do all the analysis in your notebook as you go.

Important Note:

If you do not attend a laboratory and have no excused absence, you will receive a zero for that laboratory. If you do not inform your laboratory partner(s) in advance that you will not attend, you will receive a zero. There is no penalty for an excused absence, but a *timely* makeup must be arranged with your TA.

Some further hints at maintaining a clear, well-organized lab notebook:

- 1. Write succinctly. You don't need extensive discussion of the theory or "purpose" of the experiment. Equipment lists are not required in this lab. Fewer words and more pictures!
- 2. Do not write on scrap paper. Do your scratch calculations in your notebook. You can cross them out later (or reserve the left hand page everywhere for scratch calculations, etc.). If you bring in work you prepared in advance, e.g., the derivation of an equation, circuit diagram etc., then tape it in your notebook in the appropriate spot.
- 3. You should **always, ALWAYS** have a good schematic diagram of the circuit you are working on. If you wish you can photo copy the one from the write-up and tape it in. You should always have the circuit diagram in your notebook first, *before* building the circuit by following the diagram. *Do not try to draw a picture of the circuit learn how to make and read a circuit schematic.*
- 4. Ask for explanations of circuit symbols you do not recognize.
- 5. Measuring instruments are not usually shown. (Ideal instruments are nominally assumed, where the instruments do not perturb the circuit, but make careful notes of what you did if this was not the case.) You can show the point where a meter or scope is connected see item 8 below.
- 6. Conventionally, signals flow left to right in circuit diagrams. The power supply line is at the top, ground is at the bottom, except for push-pull circuits, where ground is in center, positive supply at the top and negative supply is at the bottom. Try to keep circuit connection lines either horizontal or vertical. Wires are just lines. Crossing lines do not imply an electrical connection unless the intersection is enhanced by a large solid dot. Standard conventions for circuit connections are shown in the figure below:



7. Conventional ground symbols are shown below. Complex systems may need multiple sets of grounds, usually connected only at a single point, and the different symbols are used to distinguish these. But we won't need to deal with that, so you may use any one.

$$\bar{\uparrow} \dashv \dot{\uparrow} \downarrow$$

- 8. If you wish to refer to the voltage at a particular point in the circuit, then just label it on your schematic, e.g. the letter "A" in a circle with an arrow to the point in the cirucit. Measurements of that point can then simply be labeled " V_A ". Note that the voltages are always potential differences between two points. Whenever there is a reference to the "voltage at a point", it is implied that this is the potential difference relative to a reference point in the circuit called "circuit ground", which is marked with one of the symbols above. The voltage measured between two arbitrary points should be labeled " V_{AB} ". Currents are marked by putting an arrow parallel to a wire and labeling it " I_2 " or some such. The direction of the arrow is arbitrary if the current is flowing the opposite direction it will have a negative value. The current could be measure by cutting the wire at that point and inserting an ammeter, or more usually by finding a resistor it flows through and measuring the voltage across it. Voltmeter, ammeters, oscilloscopes and other measuring instruments are not usually shown on the schematic unless their characteristics are part of the experiment.
- 9. When plotting graphs, be sure to: label the axes appropriately, put the measurements on the graph as discrete data points (do not "connect the dots"), and plot a theoretical or notional fit, where applicable, as a continuous line. (The idea is that you only know the measurements where you took them, but in principle you could calculate the model for any point even if you actually only calculated it at a few discrete points, you know from the formula that it will go smoothly between them.

Note: the following is the campus or department standard language and should be considered an official part of the physics 321 syllabus. But you've probably seen this all in another course:

Physics Department Code of Conduct

Conduct

The University of Wisconsin–Madison physics department consists of members with varied national origin, ethnic background, race, gender identity, sexual orientation, gender, age, physical ability, and religion. As a community, we are committed to being positive and inclusive in all regards. We follow the University of Wisconsin–Madison code of conduct. The members of University of Wisconsin–Madison must maintain a professional environment in an atmosphere of tolerance and mutual respect and abstain from all forms of harassment, abuse, intimidation, bullying, and mistreatment of any kind. This includes, but is not limited to, intimidation, sexual or crude jokes or comments, offensive images, and unwelcome physical conduct. Members must keep in mind that behavior and language deemed acceptable to one person may not be to another.

Remediation

Any person who is concerned that an individual has violated the department's code of conduct may bring the issue to the attention of the department's climate and diversity committee who will assist in suggesting steps to resolve the issue (tulika@hep.wisc.edu).

. Issues that cannot be resolved by the climate and diversity committee may be brought to the direct attention of the department chair or associate chair. The department chair/associate chair will seek information on the nature of the problem and discuss the complaint with all parties involved and appropriately inform the parties of the outcome. If the issue cannot be resolved by the chair/associate chair or if it would be inappropriate to bring the issue to either the diversity or inclusion committee or the chair/associate chair, the individual may contact the appropriate resources outside the department depending on the nature of the issue, including the Dean of Student's Office, the Associate Dean in the College of Letters & Science, the Ombuds Office, and the Title IX Office for Equity and Diversity.

Mental Health Assistance

As a student you may experience a range of issues that can cause barriers to learning. These might include strained relationships, anxiety, high levels of stress, alcohol/drug problems, feeling down, or loss of motivation. University Health Services can help with these or other issues you may experience. Help is always available. You can learn about free, confidential mental health services available to you; call 608-265-6600 (option 2) orvisit uhs.wisc.edu: https://www.uhs.wisc.edu/mental-health/

You can also reference these drop-in (no appointment required) locations: <u>https://www.uhs.wisc.edu/wellness/lets-talk/</u>

Land Acknowledgement Statement

The Department of Physics acknowledges that the University of Wisconsin–Madison occupies the ancestral lands of the Ho-Chunk, a place their nation has called Teejop since time immemorial. In an 1832 treaty, the Ho-Chunk were forced to cede this territory. Decades of ethnic cleansing followed when both the federal and state government repeatedly, but unsuccessfully, sought to forcibly remove the Ho-Chunk from Wisconsin. We commemorate the resiliency of the Ho-Chunk and other eleven First Nations of Wisconsin. This history of colonization informs our shared future of collaboration and innovation. Today, we respect the inherent sovereignty of the Ho-Chunk Nation, along with the eleven other First Nations of Wisconsin.

Institution Name if Letterhead is not Used: University of Wisconsin-Madison

Course Subject, Number and Title

Special topics title, if applicable.

Credits

The number of credits associated with each course can be found in the Guide.

Canvas Course URL

Course Designations and Attributes

Honors, general education. service learning, etc.

Meeting Time and Location

Instructional Modality *Indicate the course mode of instruction: face-to-face only, online only or blended.*

Specify how Credit Hours are met by the Course

This is a requirement of our HLC accreditation. Use one of the three definitions below from the <u>UW-Madison Credit Hour Policy</u>. Follow <u>these recommendations</u> for how to describe this credit information in a syllabus.

- a. Traditional Carnegie Definition One hour (i.e. 50 minutes) of classroom or direct faculty/instructor instruction and a minimum of two hours of out of class student work each week over approximately 15 weeks, or an equivalent amount of engagement over a different number of weeks. This is the status quo and represents the traditional college credit format used for decades. If you have regular classroom meetings and assign homework, reading, writing, and preparation for quizzes and exams, make this choice.
- b. 45 Hours Per Credit One credit is the learning that takes place in at least 45 hours of learning activities, which include time in lectures or class meetings, in person or online, labs, exams, presentations, tutorials, reading, writing, studying, preparation for any of these activities, and any other learning activities. This option may be useful for nontraditional formats, "flipped" courses, lab courses, seminars, courses with

substantial meeting time and little out-of-class work, or any time this is a better fit for learning activities than the Carnegie definition.

c. Demonstration of Equivalent Learning – This option is likely to rarely be used because it needs thorough documentation of learning as equivalent to what would be learned in the Carnegie credit format or 45-hour formats. Contact the Vice Provost of Teaching and Learning before using. One credit is established by a demonstration of student learning equivalent to what would be learned in a course with one of the other methods of determining credit.

*Note: Regular and substantive student-instructor interaction is always a requirement of UW-Madison for-credit learning activities.

OFFICIAL COURSE DESCRIPTION

Course Description

As approved through governance, presented in the Guide.

Requisites

As approved through governance, presented in the Guide.

COURSE WEBSITE, LEARNING MANAGEMENT SYSTEM and INSTRUCTIONAL TOOLS

Provide link to course website (if available).

Provide information about the university's learning management system, <u>Canvas</u>, and other university instructional tools or platforms (e.g., <u>Blackboard Collaborate</u>, <u>WebEx Meetings</u>, <u>MS Teams</u>, <u>Zoom</u>, etc.) that will be used in the course. It is strongly suggested that students explore and become familiar not only with Canvas' site navigation but with content and resources available for the course.

COURSE LEARNING OUTCOMES

Course Learning Outcomes

Course learning outcomes are statements about the knowledge and skills that students are expected to know, be able to do, or value by the end of the course. Include the course learning outcomes that have been previously approved in the course proposal. Please distinguish learning outcomes for undergraduate vs. graduate vs. variable credit activity. Find guidance on how to write learning outcomes.

GRADING

- Indicate how the course is graded and relative weights of assessments
- Provide linkage between weights and letter scores if possible
- Indicate whether the final grades are curved or not
- Indicate whether attendance and/or participation is part of the grading
- Separate grading requirements for graduate students if appropriate

DISCUSSION SESSIONS (in-person or remote)

• Add information specific to discussion sections as appropriate or attach a separate document.

LABORATORY SESSIONS (in-person or remote)

• Add information specific to lab sections as appropriate or attach a separate document. If <u>in-person lab</u> session, additional hygiene protocols, safety standards and physical distancing measures may be required (Instructors please provide details here.)

REQUIRED TEXTBOOK, SOFTWARE & OTHER COURSE MATERIALS

- List any required materials such as text books, open educational resources and eTexts
- List any required course or eText fees
- List required software tools even if available as part of UW-Madison licensing

Campus provides students with <u>technology guidelines and recommendations</u> for instruction. Students should consult these resources prior to the start of the semester.

HOMEWORK & OTHER ASSIGNMENTS

- Provide rules and expectations concerning homework
- How are assignments to be submitted (online, Canvas, Dropbox, instructor mailbox, other)

EXAMS, QUIZZES, PAPERS & OTHER MAJOR GRADED WORK

- List the summary period and the expectations associated with it
- List relevant details about the exams, including if the quiz or exam will be proctored (see Exam Proctoring section). Include dates, cumulative or not, open-book or open-note, access to electronic devices, policies for make-up dates, etc.

Exam Proctoring

Instructors should inform students in advance and include a statement in the course syllabus that proctoring (remotely or in-person) will be required. The instructors should also make it clear in the syllabus that failure to use the proctoring service assigned will result in specific consequences (e.g., zero on exams, quizzes, etc.). Once the decision to use the proctoring service is made by the instructor and the student has registered for the class, the use of the proctoring is a condition of enrollment in the class. This should be stated explicitly in the syllabus.

Recommended Exam Proctoring Statement

Instructors have the authority to decide whether to proctor their tests, quizzes or other course assessments whether the courses is offered in-person or remotely. Failure to use the proctoring service assigned will result in _____(state consequences: e.g., zero on exams, quizzes, etc.).

Digital Exam Proctoring

Instructors planning to use a digital exam proctoring tool, should include information about the proctoring process, including what students will be expected to do, how to access the exams and what technology is required as part of the syllabus.

<u>Honorlock</u> is the campus-supported proctoring tool. <u>See FAQ's about Honorlock</u>. Additional resources about Honorlock include:

- See suggested <u>syllabus language for use of Honorlock</u>
- For Instructors: Honorlock Quick Guide and UW-Madison's Knowledge Base documentation
- For Students: Getting Started for Students

Privacy of Student Information and Digital Proctoring Statement

The privacy and security of faculty, staff and students' personal information is a top priority for UW-Madison. The university carefully reviews and vets all campus-supported teaching and learning tools, including proctoring tools and takes necessary steps to ensure that tool providers prioritize proper handling of sensitive data in alignment with FERPA, industry standards and best practices.

Under the Family Educational Rights and Privacy Act (FERPA – which protects the privacy of student education records), student consent is not required for the university to share with Honorlock those student education records necessary for carrying out the proctoring service. 34 CFR 99.31(a)(1)(i)(B). FERPA specifically allows universities to treat vendors as school officials and to share student education records with them where they perform services for the university and are subject to FERPA requirements governing the use and redisclosure of personally identifiable information from education records. Honorlock is FERPA compliant and is bound by the terms of its agreement with the university to comply with FERPA's restrictions on the use of student education records.

PRIVACY OF STUDENT RECORDS and the USAGE of AUDIO RECORDED LECTURES

See information about privacy of student records and the usage of audio-recorded lectures.

Usage of Audio Recorded Lectures Statement

Lecture materials and recordings for [insert class name] are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

OTHER COURSE INFORMATION

• Provide any additional info (identify honors or other special attributes or activities)

HOW TO SUCCEED IN THIS COURSE

Provide information on how students can best succeed in the course. For instance, instructors might include suggestions about completing assignments or studying for exams. Instructors might also include resource links to other campus services such as:

- University Health Services
- Undergraduate Academic Advising and Career Services
- Office of the Registrar
- Office of Student Financial Aid
- Dean of Students Office

STUDENTS' RULES, RIGHTS & RESPONSIBILITIES

During the global COVID-19 pandemic, we must prioritize our collective health and safety to keep ourselves, our campus, and our community safe. As a university community, we must work together to prevent the spread of the virus and to promote the collective health and welfare of our campus and surrounding community.

UW-MADISON BADGER PLEDGE

UW-MADISON FACE COVERING GUIDELINES

While on campus all employees and students are required to <u>wear appropriate and properly fitting</u> face coverings while present in any campus building unless working alone in a laboratory or office space.

QUARANTINE OR ISOLATION DUE TO COVID-19

Student should continually monitor themselves for COVID-19 <u>symptoms</u> and get <u>tested</u> for the virus if they have symptoms or have been in close contact with someone with COVID-19. Student should reach out to instructors as soon as possible if they become ill or need to isolate or quarantine, in order to make alternate plans for how to proceed with the course. Students are strongly encouraged to communicate with their instructor concerning their illness and the anticipated extent of their absence from the course (either in-person or remote). The instructor will work with the student to provide alternative ways to complete the course work.

COURSE EVALUATIONS

Indicate how students can evaluate the course. For example:

Students will be provided with an opportunity to evaluate this course and your learning experience. Student participation is an integral component of this course, and your feedback is important to me. I strongly encourage you to participate in the course evaluation.

Digital Course Evaluation (AEFIS)

For instructors using the campus digital course evaluation survey tool, AEFIS.

UW-Madison now uses an online course evaluation survey tool, <u>AEFIS</u>. In most instances, you will receive an official email two weeks prior to the end of the semester when your course evaluation is available. You will receive a link to log into the course evaluation with your NetID where you can complete the evaluation and submit it, anonymously. Your participation is an integral component of this course, and your feedback is important to me. I strongly encourage you to participate in the course evaluation.

ACADEMIC CALENDAR & RELIGIOUS OBSERVANCES

• See: https://secfac.wisc.edu/academic-calendar/#religious-observances

ACADEMIC INTEGRITY STATEMENT

Instructors should discuss academic integrity with students early and often. For suggested ways to engage students in these discussions, see the College of Letters and Science <u>Remote Teaching Toolkit</u>.

By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are examples of misconduct which may result in disciplinary action. Examples of disciplinary action include, but is not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension, or expulsion.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES STATEMENT

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (See: McBurney Disability Resource Center)

DIVERSITY & INCLUSION STATEMENT

<u>Diversity</u> is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.