

Classroom Strategies Used by FYM Faculty Contributions from FYM faculty

Comment to Instructors: Below is a collection of ideas, suggestions and best practices in how we teach, handle attendance, create tests, handle office hours, grading, and all aspects of our job. It is intended to give you ideas that you can use, depending on your unique situation. Some ideas may be contradictory, but still effective, so choose one you like. This is an evolving document, so feedback and new ideas are always welcome.

ASU Sync Addendum Below

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How to Handle Your Classroom

Exerting your Authority

- It can be intimidating to walk into a room of 100 students, you being the center of attention. You have ten seconds to win them over on that first day. Speak in a friendly yet forceful tone and look the students in the eye. Be aware of your body language. Do not fidget, stand hunched in, facing to the side, or making nervous giggles.
- Insist that students attend class, be there on time, and not leave early. Do not start making threats of what happens if they do not. Just tell them how it will be, and 90% of them will fall in line immediately.
- Bad choice of words: "I expect you to be on time every meeting. If you are late twice, your grade drops a half-grade."
- Good choice of words: "I expect you to be on time every meeting."
- Most of your students are 18 years old, fresh from high school. They crave structure and a strong leader. Never be afraid to exert authority over your classroom. If students are arriving late, you ask them, kindly yet with gravity, to meet with you after class. If students are playing with their iPhone, tell them to stop, and if necessary, to meet with you to discuss.
- Stop inappropriate behavior without embarrassing a student. Often, just telling them to stop playing with their iPhone, for example, is "embarrassing" enough as the student realizes he or she is now the center of attention. Never deliberately embarrass a student. Once you have their attention, there is no need to keep jabbing at them.
- Here's a trick used with talking students or ones playing with their phones. Ask them if they have a question. They realize you are talking to them. They say "no". Then repeat, "I heard some talking. Was there a question?". They get a little squirmy and say no. Then say, "Oh okay, I thought I heard a question." This works well. They realize you caught them being lollygaggers. But it is not embarrassing in the personal sense.
- If you have a problem student, one who is always late, always making noise, and so on, then be forceful. This is a time where you may need to announce to that student, in class, that their behavior is not acceptable. Do not yell or make threats. Just tell them so. I guarantee you that every single other student will appreciate you being authoritative. They expect you to be the leader in that room and to run a tight ship. Thus, you have to step up to do so. As long as you do so in a professional manner, you will never be in the wrong and you will have the complete backing of the department.

Syllabus

- Syllabi are legal documents and thus need to be carefully written, saying exactly what we mean. Most of the back-end material is boilerplate put in to adhere to university rules. It is the "small print" that no one reads but protects us should someone fight it.
- There have been cases of students creating issues because of how syllabi are written. All it takes is one person out of 10,000 to cause trouble. Do not put anything into a syllabus that you do not intend to enforce. Similarly, do not put yourself into a corner. For example, instead of saying "4 absences means you will fail," say "4 absences means you **may** fail." Leave yourself room to maneuver.
- The wording in the syllabus can protect you from being sued.
- Syllabi must be accurate. No sloppy language, no vague terms. Since they are made into PDF links anyway, it does not matter if they run 30 pages.

Configuration of Room

- Check the classroom arrangement and what is in the classroom(s) you will be using.
- If there are two projection screens, and two projectors. One shows the problems on the in-class computer; the other one shows you working out the problem using a personal tablet.
- One projection screen, off-center, and use the chalkboard or whiteboard on the other half.
- Find your room ahead of time.
- Some of the rooms have two screens but you can only use one for computers/tablets. (This is the case for Wrigley 101.)

Technology

- Check what equipment your classroom has and how to use it. Go early enough to make sure it is working on any day that you will use.
- If equipment is not working properly, use a cell phone to call support. There is a phone number in the classroom if you need technical assistance. The toll-free number is 1-855-278-5082, the email is Classroom.Support@asu.edu.
- There is a TI emulator available online which runs in Windows. There are similar programs for OSX and Linux.
 - TI83: https://urldefense.proofpoint.com/v2/url?u=https-3A_sites.google.com_site_ti83interactivecalculator_Home&d=DwlFaQ&c=l45AxH-kUV29SRQusp9vYR0n1GycN4_2jInuKy6zbqQ&r=uC9R6yH5JknPWgLDASL-f2mJa0Htf-VAxGZ1RZi9-wg&m=vLZdZZi-DFneO8QxB2ZpbZsxANFjvrhLaY6SI75Zpg4&s=83O9_ywuZtIHSY_3m6PDo19tVAL4Ge70_wveheP_Mxi0&e=
 - TI-84s: https://urldefense.proofpoint.com/v2/url?u=https-3A_sites.google.com_a_eustaceisd.net_ti-2D84-2Dplus-2Demulator_&d=DwlFaQ&c=l45AxH-kUV29SRQusp9vYR0n1GycN4_2jInuKy6zbqQ&r=uC9R6yH5JknPWgLDASL-f2mJa0Htf-VAxGZ1RZi9-wg&m=vLZdZZi-DFneO8QxB2ZpbZsxANFjvrhLaY6SI75Zpg4&s=6CvG0VWfkyVKwmtQ45pV_bdNaGd_K5e_otuYakTD_Fs0&e=
- Do you use a doc-cam? Do you upload those notes that you write? Some students decided either they could replace class with the uploaded notes, or they could just sit there and not write. Stop uploading the uploaded notes unless something has been added later (error correction, fill in an example we did not have time for ...). Make the notes available to students who have given a reason that they need them. Doc-cams are great for large classes because you can make the writing big enough and go back to previous pages (instead of erasing, you still have it) when you want to.
- Always have a Plan B for how you are going to present your material. You can use PDFs, which I store on my thumb drive.
- All the comments about doc cams apply to tablets as well.

Network Down

- Advise students to access the course through the HW platform website directly.
- Moodle: <https://mathcms.asu.edu/>
- Vidman Videos: <https://vidman.asu.edu/>
- Webassign: <http://webassign.net/>
- MyLab Math: <https://www.pearsonmylabandmastering.com/northamerica/mymathlab/>
- ALEKS: <https://www.aleks.com/>

Students on their Phones

- Remind students repeatedly at the beginning of class to turn all such devices physically off. Stress that this means not just to put them into standby, but to power them down. A device that is in mere standby is more of a distraction because it can instantly be turned on.
- Do not allow students to keep backpacks and phones on tables during lecture and the group work. Keep students engaged while lecturing.
- The policy for the unauthorized use of technology in the classroom is clearly stated in the syllabus.

Office Hours

- You should hold about 3-5 office hours per week. Be there during those hours. If you are also in your office at other times and are willing to meet with students at those “off times”, you can also let your students know of your “unofficial official” office hours.
- Please make yourself aware of the various student services on campus to help students, such as counseling, and so on. Often, students come to see you for reasons beyond the math they are learning.
- Do not allow students to do their homework in your office.
- Do not allow students to commandeer your time, where they see you as a personal tutor. Tell them that the best use of both of your time is for them to have questions ready that you can discuss. You should not feel obliged to repeat your whole lecture because they missed it.
- Make yourself aware of the various tutoring options on campus: ours in WCLR 106 and 303, ECF- 102, the dorms, and so on (see <https://tutoring.asu.edu/>).
- Please do not give meaningless advice like “Shoot for A’s” or “Study harder”. This just shows the students you have no clue either.
- If a student asks what they need to get on the Final Exam to get a certain grade in the class, emphasize that you are doing calculations off the top of your head, and things might change. Never give them an exact percentage.
- Be sensitive to what students talk to you about. If you sense they want to discuss something personal, allow them to do so. They see you as someone they can trust and confide in. If they discuss something

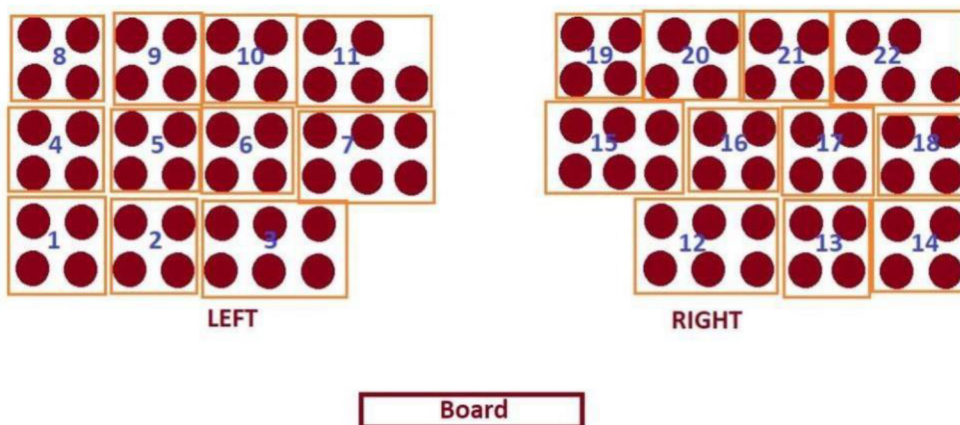
potentially in the category of mandatory reporting, immediately let Scott and/or Fabio know. There are certain situations (such as sexual harassment, etc) that demand reporting. At that very moment, do your best to assure the student you will help them and to assuage their concerns.

If at any time, you feel a student's needs go beyond math such as a student crying in your office, listen to them and deal with it properly. There may be a good reason they are crying. You have an obligation to help students and in some cases, you are the mandatory reporter. -

- Contact SOMSS advisors.
- You can also refer them to:
 - Counseling Information <https://eoss.asu.edu/counseling>
 - Student Advocacy information <https://eoss.asu.edu/dos/srr/StudentAdvocacyandAssistance>

Creating Groups

- Use Canvas to randomly mix students in groups, four people in each group.
- Once you know who is a strong student that likes helping others and who is a weak or a student has skipped classes, put them together in one group.
- Make a classroom map, where groups are assigned for the whole semester.



Cheating

- Make your policies on academic dishonesty known early. Tell students you expect honest behavior at all times. Students cheat because they panic and/or have not prepared and are not looking at the big picture. They do not see the penalty as being a deterrent. Tell them you would rather have a student come and talk to you about their lack of preparedness rather than they follow temptation and cheat. Tell them the penalties can be severe and it is not worth it.
- Students also cheat if they sense the instructor is not an attentive instructor. Many of your early actions as an instructor, e.g. learning names, engaging the class, showing interest in their progress, can go a long way toward mitigating cheating behavior later on.
- Use quizzes as a chance for students to get used to your policies. It is low-stakes so an infraction is just a 0 score but not fatal to their grade.

- In the event of a suspected cheating situation, please let Scott Surgent and/or Fabio Milner know. There is a process by which the university handle(s) academic dishonesty, and it can be lengthy. For this reason, Scott and Fabio are happy to shepherd your cases through the Dean's Office. These cases need strong evidence, and not all cheating cases are equal. Sanctions depend on the severity of the action and the evidence you can collect.
- In general, if the infraction is one of "opportunity", e.g. a student just looked onto another student's test and copied, then the XE may not be possible, but a 0 score is warranted and still a very severe penalty. In those cases, we still make the Dean aware of the student's case, and the student then has a file on them at the Dean's Office should the student ever try this stunt again.
- If the infraction is one of forethought, e.g. deliberate, thought-out intention to cheat, then the XE is a possibility, but the evidence needs to be strong.
- Any note that excuses a student that is forged or altered in any way is perjury. Not only is this worthy of an XE sanction, the student can also face more severe sanctions such as suspension or worse. Those are decisions that are made at the higher level. Scott and/or Fabio can help you in presenting a strong and impartial case.
- Do not take cheating behavior personally, nor be offended by it. Remove your emotion from it. Just get the evidence together and contact Scott and/or Fabio to get the ball rolling on the process.
- Have a "No-device policy" (including calculators).

How to Handle Grading

Instructional Assistants/Graders

- These are student workers and you need to give them a chance to correct the problem.
- Make sure you know the duties and responsibilities of your assistant (what they can and cannot do), do not ask them to violate FERPA.
- If you have a problem with an IA/grader - explain clearly to them what the problem is and give them a chance to correct it, let the committee know (gia.math@asu.edu). They should be given three chances to correct the behavior (unless it is seriously threatening student's success and/or individual's safety), the first two just from the instructor and the third a combination of the instructor and Terri Miller (chair of committee).

Legibility of Written Homework

- Have students: rewrite the problem, show all work, do not turn in scratch paper, indicate which problem set it is, etc.
- Homework needs to be organized, clearly labelled in order, neat, and legible.
- Remind students that messy homework is more likely to be counted wrong. (Of course, tests are treated differently, because of the time constraint.)

Late Work

- Students are allowed to turn in at most 2 written homework assignments after the due date. (Life happens.) Do not give numerical grades for homework that is turned in after solutions (usually on the first day of the next week) are posted; however, make a note that they did turn it in.
- There must be deadlines for submission, it takes a lot of extra work to go back and grade older papers once you have completed grading.
- If you accept late papers, this costs the grader extra time, remember they have a very strict set number of hours per week; grading late papers takes more time than grading a fresh batch; consider grading them yourself. At a minimum, consult the grader about how much time they have that week just in doing the current work; they may have used up all of the time allotted.

Extra Credit

- Use this wisely and rarely. Do not formally add it in to your syllabus. If students ask at the start of the term, tell them no, you do not offer any. Do not give them even the barest glimmer of hope that extra credit is offered. As soon as you do, they come to expect it.
- That does not mean you cannot use it. Instead, at first, be very strict and get them to assume no

extra credit is offered. Then, when you feel it is appropriate, you can throw a little extra credit here and there to keep their spirits up.

- If you regularly offer extra credit after exams due to initially low exam scores, you may want to consider how you composed the exam. If the student performed poorly due to lack of preparation, do not reward them with extra credit. Instead, insist they work harder, seek help, and stop being complacent. If you raise your expectations, students will meet it. If you lower them, they will slow down to meet those expectations as well.
- If you do decide to offer extra credit, never give out free points. Make them earn it. For example, you can give a quiz with two parts and tell them the second part is extra credit.
- The total extra credit possible should be low, no more than 2% of their total grade being reasonable.
- Students should not expect to pass a class based on extra credit work alone. However, if used carefully and at the right times, it can be a good way to motivate them to try a little harder on an assignment, and to build up their spirits when they seem to be running low. It can be an effective psychological tool.

Grades

- Include grading method in syllabus
- Numerical grades are calculated anonymously according to syllabus policy.
- After sorting, look for a gap. There's usually one of those per letter grade, which tends to be around 87% (or 77% or ...). Separate the As from the B's, from Cs, etc.
- Calculate letter grades and look at the list as compared with the names of the students. You may decide that the students at the top of each grade really should get a higher grade. They may have turned in a homework assignment late or something. A+'s are not curved, they need to earn a 100% for an A+.
- The +/- option may help you decide on how to handle a student near a cut-off. For example, a student who had a poor start to the class but improved toward the end, with a strong final, might end up at an 87%. You might decide to reward this student with a partial grade, e.g. a B+. This is also a motivator for students who may not be able to get a full grade increase via the final. If you use the +/- in this manner, only use it when in their favor. However, "bring down" a student to a minus grade, for example cannot be done. You may tell a student who gets a B- that they were really a C/C+ student who did something impressive enough (and were close enough) to be rewarded with a little extra push upward.

How to Handle Larger Classes (Works with Smaller Classes as Well)

Taking Attendance

- Use a seating chart with roster pictures (remember not to share it).
- Create attendance sheet based on groups. Have 10 groups with a group leader (optional – have students work in subgroups of 5 students). Attendance sheet is taken based on groups.
- Give a quiz using turningpoint clickers on a previous topic at the beginning of class. Be careful, as students may have more than one turningpoint clicker. If students start leaving early, have another quiz at the end of the class.
- Use a short but meaningful open-notes quiz as attendance mechanisms. Give 5-minute quizzes once every 2-3 lectures but do it unannounced sometimes at the start of class, sometimes at the end of class, and don't permit make-ups. To account for valid reasons for absence, drop the two lowest scores. If they happen to miss more than two quizzes, they probably were absent 2-3 times that many days. (Check with your courses coordinators if you are able to drop grades).
- Give group-work ("open neighbor") quizzes for attendance purposes when it is a day they are still working out the details of new topics and are not ready to work on their own with confidence yet. The math-equivalent of discussion/debate time, but easier to grade.
- In classes where technology is used during class, give (unannounced) short Blackboard/Canvas quizzes that are only open for a specified window of time. The solution explanations to these can be put into the quizzes themselves for students to review later on their own.
- Give 12 quizzes per semester - about once per week except weeks when testing - designed to take about 10 seconds each to grade. Use written and/or Canvas for the quizzes.
- Use written quizzes and or Canvas quizzes.
- Lecture for about 15 minutes on a topic. Then assign a question related to the lecture and/or homework, have students to work in a group for 10 minutes. At this time pass the attendance and walk around to make sure everybody puts initial and then match with headcounts.
- Do quick quizzes at the beginning and all must stop and hand in at the same time (make it clear that it is attendance and they MUST submit one with name, date, and signature to be counted).
- Do not pass any quizzes back. Save them as proof of attendance, but either go through solutions in class or post solutions to Blackboard or both.
- Policy for arriving late is clearly stated in the syllabus.
 - o If a student arrives late or leaves early (Have a two-minute leeway) then the students is not in attendance.
 - o If attendance is not taken, then students can arrive late or leave early but if it is disruptive, speak with them about it.
 - o If it continues, remind them that disruptive behavior can cause them to be withdrawn (by the instructor) from the class.
- When students are doing group discussion/work, use this time to take attendance and return papers.

Knowing your Students Names

- Seeking to learn the students' names, even in a large class, helps to connect with them and them feel connected to you. This will help with noticing the students more: when they are there and when they

are not, when their names are known.

- Please make a reasonable effort to learn some names in a large lecture section. You are not expected to learn everyone's name, but if you learn a few here and there, and call on those students, the rest of the class assumes you know everyone's name.
- Use roster images from your myASU page. Scan the class and make connections that way. When talking with students ask for their name and call them by their name. There are always a few students who have a unique appearance whereby you can remember their name quicker. When you hand back papers, spend 5-10 minutes calling their names. If they visit in office hours, ask for their name. You will make more mental connections that way, too. If you can learn about 10 students' names (out of 100) after a couple weeks, and then if one of those students asks a question, reply to that person by name. Then the rest of the class will be impressed by your ability to know all names. However, you do not really know all their names, but you do not tell them that, either.
- Students appreciate that you take time to learn their names. It is a basic sign of respect. Furthermore, it enforces a perception that you are one of those instructors who pays attention. Students will be less likely to try to be anonymous and cause trouble.
- Ideally, by about the halfway mark, you should know perhaps 25-50% of their names, even if on a first-name basis only. You should also be able to recognize your own students and when you have a "guest" in your classroom who should not be there.
- Make some effort to learn some names. Doing so makes your job easier, the students are more apt to behave, and frankly, a lot will like the fact you know their name. If you can memorize 50 antiderivative forms, you can certainly memorize 10-20 names per class.
- At the beginning of the semester, have the students complete a Syllabus Acknowledgement form that they are then required to turn in during office hours. This will guarantee meeting each student in person at least once during the first two weeks. It is very hectic those first two weeks, especially the last two days before the deadline for completing this assignment, but it always results in many students becoming regulars at office hours once they know where and when to find you.
- The photos that come with the roster certainly help. The photos can be found in your roster by clicking on "Roster Photos".
- Groups formed from very beginning can easily aid in remembering student names.
- As a bonus from not passing back materials during class, more students will come to office hours and you get to meet them even in 100+ person classes.
- To enhance participation, use a random number generator. Pull up the class roster in MYASU. The roster provides a numbered list of students. Have the number generator pick a number and then call on that student from the roster to answer a question. This helps put names to faces and keeps students attentive in a large class.
- With groups formed at the beginning, this aids in easily remembering their names.

Testing

- Use the 80-20 rule when creating exams. Eighty percent of the content must remain the same as what the coordinator shared with you. Twenty percent of the exam can be changed. Just be close. Do not abuse it.
- To the best of your ability, keep exams short, 50 min. Avoid bad test-building habits which result in 10-page, 20-question monstrosities.
- Have (at least) three versions of the test for big classes. That way, when someone comes in late, you can give him or her a test different from either his or her neighbors.
- Create Maple and Java programs to generate problems, as well as their solutions. Having the computer write up a solution -- literally, in plain English -- can save 30 minutes per version of the test given. These programs also guarantee that the solutions are "nice" (i.e., usually integral). You can also use these

programs for written homework. (MAT 242 is virtually automated; MAT 243 does require some "human-written" problems.)

- Possible means to combat bathroom breaks:
 - If a student needs to use the bathroom in the first twenty minutes, have them turn in their test to you. You then hand back a second version (similar problems, possibly a shade more difficult) when they return.
 - If the student asks to use the bathroom toward the end of the class, they turn in the test and they are done.
 - If the student had a true emergency, you two can discuss a possible solution afterwards.
 - If you know this student is generally well behaved and not one to try to game you, you can have some confidence it was a true emergency.
- Stop the grab and run (some have had students come in, take a test and leave the room). Take students ID and do not return it until test is returned. Knowing your students by name and face can help avoid this scenario.
- Since the total number of points in online MAT 242 class is 299, add "Mystery Point", for when students post something relevant in the forum.
- Some have developed original systems of producing randomly generated paper exams, so that every student in a class would get their own unique form, similar to online systems. The system is described here: <https://math.la.asu.edu/~ifulman/random-exams>
- When grading, grade everybody's page 1, everybody's page 2, etc. It helps with consistency, and you will not know names until you have graded all the problems.
- To clear all calculators (there are you-tube videos about how to store so that it stays there when there is a memory dump); clean calculators. Have IAs and/or proctors assist with this.
- To print copies of your tests go to: <https://math.asu.edu/> Scroll to the bottom of the website. On the right side, click on "Forms". From "Faculty Forms" click on "Copy Request Form".

Remain FERPA Compliant

- Design exams so that the grade is on the back page (or even better, the inside of the back page). When returning the exams, arrive early, divide exams (which you already sorted alphabetically by last name) into separate stacks by the first letter of the last name. If you have at least two empty tables in front of the first row (many classrooms have them, to accommodate students who have poor vision), put the stacks there, in alphabetical order.
 - o Important: if all students are allowed to pick up at the same time, it will be chaos, and you cannot be sure that FERPA is respected. Call the A's first, then the B's, etc. Students are able to find their own test in a small stack of tests very quickly. As they are doing so, watch carefully that tests remain with the cover page up and grades remain invisible.
 - o I think this system is FERPA compliant, but if there are concerns that students might pick up the wrong test, modify the scheme so all tests are returned through you. It is slower because you have to ask students their name, and then find the test yourself, but it is still reasonably quick since you only have to search a very small stack for each student.
- For the exams I used a class number, randomly assigned using Blackboard/Canvas. Order exams based on their class number and this speeds up the process of giving back the exams. Digitize this so that everything is FERPA compliant.
- Set aside 15 minutes of class to hand back exams. Hand them to the individuals (with an IA) calling names, students are required to view them (no writing). If there are, any grading questions keep the exam and discuss during office hours. Do not pass any quizzes back. Save them as attendance but

either go through solutions in class or post solutions to Blackboard or both

- Do not pass any tests back. These are summative assessments and are not separate items on their own to be "studied" to prepare for additional tests. Students can study from their homework, notes, texts, etc. Keep tests in your office for the semester and offer to let students look them over if they wish.
 - *As a bonus from not passing back these materials during class, more students will come to office hours and you get to meet them even in 100+ person classes.*
- FERPA - decide early how you will handle this, it is important. Use the Dropbox to discuss online grade questions. Email and Google docs are not secure.
- Do not ask graders/IAs to violate FERPA.
- Passing back papers depends on class size: small class, hand them back to individuals; large class, if around 60 and you have an IA, then the pair of you working at the same time can hand them to individuals; for larger classes, have students pick them up from you in office hours.
- Put a warmup problem on the board then start handing back quizzes about 3 minutes before class begins. Then, ask all students whose last names begin with the letters A-F to come down. They form a line and very quickly pick up their quizzes. Then call G-L, etc. After doing this once or twice, students know when to expect their name to be called, are lined up, and ready to go. This process only takes a couple of minutes of class time. Then discuss the problem on the board. This also helps put names to faces as each student as claims their quiz. Additionally, this helps me take attendance on those days, as unclaimed quizzes indicate lack of attendance.
- Student can come in office hours to get the exam.
- Have two versions of tests, print them on different colors. Call students by the group and hand their test individually by test colors.
- Hand papers back to individuals or have TAs do it in recitation. This works with one instructor and one IA with up to 70 students. For larger classes record the score where the students see it (whatever system you are using) and have them come to office hours to pick up tests.
- Exams are passed back in recitation to the individual student. In larger classes (up to 70), Set aside 15 minutes of lecture to hand back exams. Hand them to the individuals (with an IA, two calling names); students are required to view them (no writing) and leave it (if they have grading questions).
- Do not return quizzes back to students. Send them answer key and discuss solution if students ask questions.
- Do not pass any quizzes back. Save them as attendance proof, but either go through solutions in class or post solutions to Blackboard or both.
- Blackboard and WeBWork. Grades are posted in WeBWork, as all the homework and tests are WeBWork based.

How to Handle Online Classes

Basic Information

- Include this policy in your **online** syllabi *“The instructor is not available for face to face meetings even for students who live on or near the Tempe campus. This rule ensures that all students have an equal opportunity and equal access to help. Making in-person office hours available to students would create a two-tier system of students - those who have the privilege and benefit of in-person help and those who do not - and starve The forum of content. Questions asked and answers given in person would not get posted on the forum and be unavailable to most students.”*
- Students need clear guidelines on how to submit (format and what to use), for their homework.
Instance.
- If you require .pdf format, the students can use the free (for any) phone app CamScanner.
- Homework needs to be organized, clearly labelled in order, neat, and legible.
- Homework - First students need clear guidelines on how to submit (format and what to use), for instance, many people require that a pdf created with the free for ANY phone app CamScanner be used to create a single pdf document for each assignment. Additionally, the homework (just as is reasonable to require in class) needs to be organized, clearly labelled in order, neat, and legible.
- At the beginning of the term, find out where everyone is from. [I once had a student who was stationed in Guam, about as far away from Tempe as possible!] Not only do you learn a little bit about your students, but if an emergency occurs (like a hurricane), you will know who might have trouble with their Internet connection, assignments, etc.
- For A, B, and Summer classes keep the material as close to a true semester as possible. The integrity of the course must be upheld. Check with course coordinators on how to do so.

Online Grading

- Only accept files in PDF, and preferably, as a single file per student. Please do not accept any alternative formats. PDFs open quickly and allow certain ease in grading, whereas other formats like bitmap are awkward. Remind students that creating PDFs is easy. Word has a "save as" option. Drop-Box will create PDFs automatically. Phone aps do this, and sites like docupub.com create PDFs for free.
- Insist that work be done neatly and in order. Use a dark ink or thick pencil to ensure visibility. Ensure the page is centered within the image, and extraneous material trimmed. Students sometimes take an image of their homework from a distance so that the sheet itself appears small, the pencil markings are unreadable, and there is a lot of surrounding junk material in the image.
- Enforce due dates. Leaving dates open means the grader has to go back in regularly to locate late submissions.
- Remind students to actually hit "submit" when submitting their work.
- Graders have the right to refuse to grade illegible submissions.

Forum Sites

- Canvas Discussions, Slack, Yellowdig
- Require that students include a screenshot of their version of an online homework problem. This screenshot needs to be properly cropped (not show entire desktop or such).
- Since the total number of points in my online MAT 242 class is 299, add a "Mystery Point", for when students post something relevant in the Forum.
- Each forum works well for online classes. The day assignment due send an announcement to students mentioning that this is the folder to ask question for this section and sometimes start a discussion by raising a question.
- It is very useful for online classes. Be strict on the Code of Conduct mentioned in the syllabus. Study the syllabus very carefully specially for online classes and follow it strictly. Go over the chapter test and final exam questions to make sure contents match exactly written in the syllabus. Never extend due date unless it is due to reasonable cause and set individually by students. During exam time, keep your forum inactive so that students cannot talk about the exam.
- Disable anonymous posting and student polls. (This will make sure they do not misbehave or try to start a mutiny.) Wait a day before answering questions to give the students an opportunity to work it out together. Eventually provide an explanation each question or refer them to one of the students' answers if it is correct and thorough.

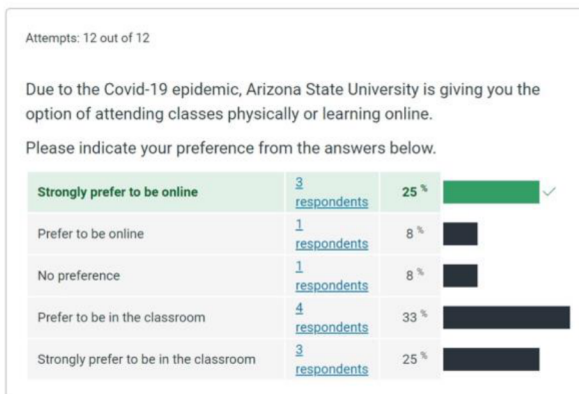
ASU Sync Addendum

How to Prepare for your Classes

Polling

- Use google forms to survey your students and send them the link through the roster. Since not all students have answered yet and some students might change their mind, I am planning to have my first day of class via zoom for the whole class and take a poll on that day.
- Administer a Canvas quiz before the first day of class to ask students what their preference is.

Question Breakdown

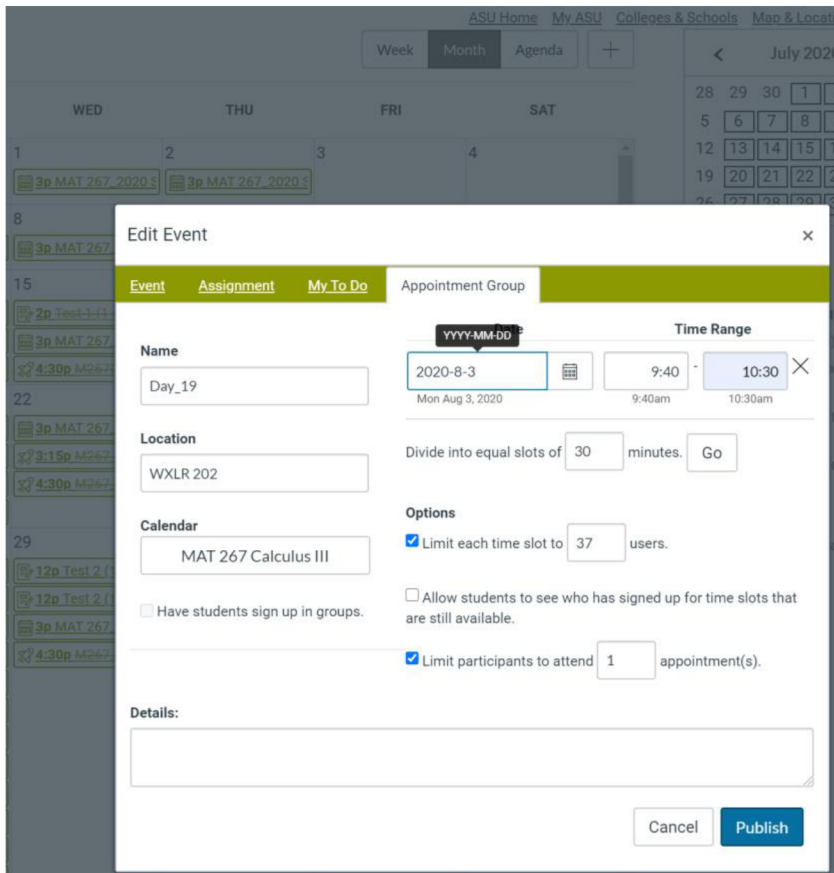


	A	H	I	J
1	name		5522890: Due to the Covid-19	
2	Z		Strongly prefer to be in the classroom	
3	Is		Prefer to be in the classroom	
4	Ja		Prefer to be in the classroom	
5	E		Prefer to be in the classroom	
6	D		Strongly prefer to be online	
7	R		Prefer to be in the classroom	
8	C		Strongly prefer to be online	
9	M		Strongly prefer to be in the classroom	
10	Ja		No preference	
11	Ja		Prefer to be online	
12	R		Strongly prefer to be in the classroom	
13	T		Strongly prefer to be online	

- If you're holding in-person classes and you are worried about signups sheets to keep the room below the new approved capacity, Canvas has a signup feature, Appointment Group, that can manage the signups for us. And if a student signs up but then decides he or she won't go, they can cancel the appointment making their slot open again to other students.

And a way to make it somewhat fair for taking turns for attending in person would be to have the next day's signup during the current class. (If I make the Appointment for the next class day available during class when the students in-class have all their electronics out of sight, then students who wanted to attend in person but missed the signup for the current class would have first dibs on signing up for the next class.)

The Appointment Group can be reached from the Canvas Calendar by clicking on the + to the right of the Agenda:



Here are some links (from Tufts) if you want to learn more:

- <http://tuftsedtech.screenstepslive.com/s/18992/m/73355/l/810719-how-do-i-create-an-appointment-group-sign-up>
- <http://tuftsedtech.screenstepslive.com/s/18992/m/73355/l/810725-instructor-how-do-i-check-student-sign-ups>
- <http://tuftsedtech.screenstepslive.com/s/18992/m/73355/l/810722-student-how-do-i-sign-up-for-an-appointment-group>

Syllabus (Wording)

- Immersion modality: This class will follow the Immersion model of delivery. Classes will be held in person in our scheduled room and at the scheduled time, with a simultaneous remote delivery via Zoom. Your instructor will specify how the in-person arrangements will occur. If you are unable to attend in person, please notify your instructor (from your ASU email account) in a timely manner to make them aware.
- SYNC modality: Classes will meet at the time and dates listed in the official ASU Schedule of Classes, and will be held via Zoom. Your attendance is required as it would be in a normal in-person class.
- Zoom Etiquette: During the Zoom sessions, please log in on time and assure that you have a reasonably secure connection. Please use your full name or first name-last initial. No outside attendees will be allowed, and during the sessions, please keep your microphone's audio muted except when needing to talk to the instructor. The instructor reserves the right to remove anyone from the Zoom sessions for disruptive behavior.
- Masks: For sessions held in person, masks and other PPE must be worn in accordance with ASU's policies. Failure to do so will result in your being asked to comply, then asked to leave if unable or unwilling to comply. Deliberate refusal to comply will be treated as a Student Code of Conduct violation and referred to the Dean's office for review.
- The Y grade is equivalent to a C or higher but does not count in grade-point calculations. You are advised to speak with an advisor in your major's college to understand how the Y grade may affect your student standing, requirements for your major, your scholarships, and so forth. Requests for the Y grade should be made to your instructor no later than xx. In general, requests for the Y made after xx will not be considered.
(parenthetical note to instructor - suggestions for xx = midterm or withdrawal date)

Canvas

- Create a course tour video (navigating Canvas) and make it available on the welcome page. (2 – 6 min)
- Create a Welcome video. Include course main topics. (2 – 6 min)
- Consider the ideal chronological order in which students should approach each lecture/reading/assignment and place them into this sequence for each learning module.
- Make every link as clear as possible through text and underlined formatting.
- Use a similar sequence and visual appearance with your content items from week to week to help the students develop expectations and a routine that will set them up for success.
- When students need to access an area or page in a different course area, provide direct links for them.
- Embed videos in Canvas to avoid links that lead them to an external website.
- Do not duplicate information, i.e. copy the same information into different places in the course shell. This makes shells hard to maintain or customize. Faculty who are not very familiar are likely to edit one copy and forget the others, leading to student complaints about inconsistency or contradiction. Don't copy, link.
- Never create link chains though, where one page tells the student to look up the information on another page, which redirects the student to yet another page, etc. Link to the final destination.
- Avoid information fragmentation. For example, don't give some information about an exam on the syllabus, additional information in a module page where the content is covered, and yet more information in the instructions box of the exam. Keep it all in one place and create links to it from other pages.

How to Prepare to Teach

Setting Up

- If you teach an immersion class, please develop a system by which your students attend in person. For example, divide them into groups T & Th (for T and Th classes) or groups M, W, & F (For MWF classes). However, the way the students are grouped is up to you. Students should only be allowed to attend on their given group day (or stay home if they feel they should). In the event, a student contracts COVID-19 and contact tracing needs to be performed, you must let the health-care professionals know which group the affected student was in. You do not necessarily need to take attendance or have sign-in sheets. The group identifier should be sufficient.
- Establish your presence early and often. Post announcements and appear on video.
- Orient students to the online course. Make a video of navigating through your course in Canvas.
- Break learning in smaller chunks.
- Establish a pattern of activity.
- Describe expectations for online participation, communication, and netiquette.

Zoom

- [Teaching with Zoom](#)
- Use your 'personal' room. For exams, however, out of an abundance of caution create separate meetings that require students to register ahead of time using their ASU credentials. Students have not had problems accessing class this way.
- Use waiting rooms in general; this way if you have to use them for tests/quizzes etc., both you and the students will be familiar with it.
- Require login via asu.edu. Failure to do so will result in MANY guest logins and then if you are using polling for any grading you will not have names attached to the polls. Additionally, if this is required at all times then you will not have any sudden emergencies with people who cannot login on test/quiz days.
- Make sure that Chat is set for private chat only with host. (Saves possible embarrassment to students and lecturer if someone goofs.) Additionally, it leads to quite a bit less "talking in class".
- Set all to be muted on arrival. Allow them only to unmute briefly to ask/answer a question. (Space bar works to unmute temporarily while they speak.)
- Require students to show video. You have a better idea if they are really there most of the time or not.

- If you want to transfer files to students via chat, you should require them to test it. I had several students who could not receive files that way; so far, I have not completely determined why but my latest poll seems to indicate that the problem occurs if they are trying to use tablets or phones.
- Turn off annotation while you are sharing so that they don't start drawing goofy things on the shared screen/document.
- If you want recordings, make sure you know which settings to use depending on the purpose of the recording. For instance, for proctoring it should be gallery view with names on thumbnails. For lecture videos, you want shared screen with speaker but no names (FERPA issues).
- Have a plan for how you will present the material and practice before you do it. Highly recommended if you have it, a tablet with a pencil is the easiest way to use a whiteboard/chalkboard to answer on the fly questions. Most students do not like presentations in which the work is all pre-done and you just talk through it.
- Practice the online grading system; know what you can and cannot do. Also, tablets with pens highly recommended here (grading was at least 3 times faster with tablets).
- The "Participants" option of Zoom pops up a window, there is a button there which says, "Raise Hand". You can then have that particular student un-mute their mic, ask you the question, and then re-mute when they're done. Muting mics helps cut down on bandwidth, in addition to being good netiquette. (If the mic's on, everyone can hear them.)
- BTW, mention to your students that if their webcam is on, then everyone in the class will be able to see them, so make sure they're dressed tastefully.
- Use waiting rooms in general; this way if you have to use them for tests/quizzes etc., both you and the students will be familiar with it.

Groups

Provide students with opportunities to interact with peers, such as through discussion and group work.

- **Creating Groups.** Research shows that high-functioning groups are historically composed of 5 people.
- Choose random or self-enroll groups. For larger courses, creating random enrollment for groups may be best. Random group assignment is easy in Canvas.
- Self-enroll is also an option or if you would like students to choose enrollment based on time zone. You can gather info before creating your groups by using tools like ZeeMaps or Google Survey. Simply name your groups based on your data gathering and assign students to self-enroll based on their preferences.
- Breakout rooms should be set up in advance for so that you are selecting the groups that work together.

How to Prepare for Testing

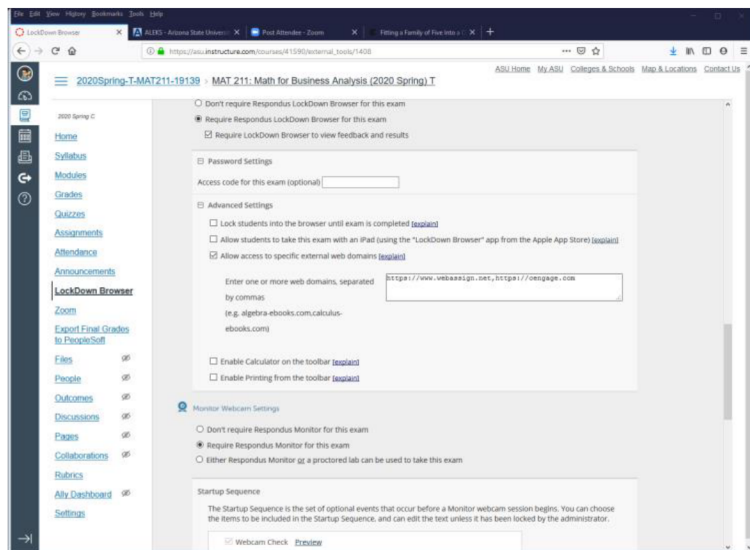
Testing

- Give a practice 'exam' first, so the students can go through the process once to get familiar with what to expect before the true exam.
- Use waiting rooms in general; this way if you have to use them for tests/quizzes etc., both you and the students will be familiar with it.
- Provide clear instructions. Know tech requirements. Have a backup plan and alternatives. Be flexible.
- During the exam time, you can monitor both WeBWorK and Canvas to see who is still active on the exam and the Canvas quiz.
- Tell students they may want to set your test taking device up with a wired (i.e. ethernet) connection since wired connections are more reliable, especially in spectrum-crowded urban locations.
- Google the questions you are considering before using it. You may find it on the internet with little effort. If you do edit the question to make it different.
- Set up a quiz (exam) in Canvas using RLFb. The quiz can only have one question. That one question contains the password for the WeBWorK test, and a link to the WebWorK test (the link the students will see is <https://webwork.asu.edu>, but it will actually go to the exam, e.g.,) https://webwork.asu.edu/webwork2/Reynolds_MAT_275_Spring_2020/proctored_quiz_mode/Exam3). Allowing access to <https://webwork.asu.edu> is sufficient so the students could have two attempts and also click on a picture to enlarge the image.

The only downside is that the monitoring software does not run on Chromebooks (only PC, Mac, and some on iPad), and also this requires them to have a webcam and microphone. However, these cases are fairly rare, and can be dealt with on an individual basis.

On the positive side, you do get a full video of the student's ID, environment scan, and testing session (just like with RPNOW). Also, the "bot" based analysis of the testing session seems equally (or perhaps more) accurate than the live proctors' analysis of the testing sessions.

- Make a document submission assignment in Canvas and require that the student's written work be uploaded within a short time window of the test's completion.
- Incorporate an honor statement. The one question has the password and the link for the WeBWorK exam and asks the students to close WeBWorK and come back to the exam and answer the Honor statement **after** they finished the exam.
- This is done at the end of the exam so that the students will not have access to their phones prior to submitting their exam.
- You can use the lockdown browser and Respondus monitor for quizzes (exams) that are implemented on Canvas.



Advanced Settings

- Lock students into the browser until exam is completed [\[explain\]](#)
- Allow students to take this exam with an iPad (using the "LockDown Browser" app from the Apple App Store) [\[explain\]](#)
- Allow access to specific external web domains [\[explain\]](#)

Enter one or more web domains, separated by commas
(e.g. algebra-ebooks.com, calculus-ebooks.com)

- For proctoring, have a clear plan for checking people in and make sure that everyone understands it. Make sure that students are not using virtual backgrounds. You also need to make sure the students position cameras reasonably.
- If this is indeed a scenario that can play out in the fall, we should be ready with a testing arrangement that can work uniformly within a section. One possibility is to augment either the Zoom testing or the Respondus testing (or Respondus + Zoom, etc.) with a frequent spot-check arrangement.
- All students take the exam at the same time. Open exam five minutes before class starts. Close exam five minutes after class ends.
- During the exam time, you can monitor both WeBWork and Canvas to see who is still active on the exam and the Canvas quiz.
- This could be a 'flipped' testing scenario, where the in-person portion (whether live in a class setting, or via short Zoom sessions with each student) would become a short 'quality control' portion, and then the bulk of the testing time is handled by the other online mechanisms (whether Respondus or some other means). Another flipped testing scenario would be having a short in-person test with just two or three representative questions as the in-person portion, which serves to demonstrate authenticity of the work, so that we can rotate students in and out of the test quickly and have several such mini-sessions in a typical hour. This would allow us to drastically reduce the density of students in the room, while also minimizing the need to arrange for larger rooms.

- You could even get creative with at least a portion of the 'out of class' testing portion, making some of it more exploratory so that we could use that portion as an enhanced learning experience. The 'out of class' portion could have a didactic component done via Respondus (for which the authenticity was verified by the uniformly administered mini-test in the classroom or via a Zoom meeting), and then an open-ended exploration phase so that the out of class portion is not seen as pure drudgery, but rather an interesting challenge.
- Have some ideas in place just in case a large majority of students become reluctant to go into crowded testing sessions or classrooms. If there were a sudden spike in the presence of the virus on campus, this would likely drastically increase the percentage of students who demand alternative testing. (Similarly, students who realize that this is an option may request it even if they don't feel worried by the in-person scenario, simply because they will feel more comfortable testing from home.) In either case, it is a potential avalanche that may not occur, but which we should be prepared for.

Academic Dishonesty

- *Do this in such a way so as not to make a direct accusation of dishonesty. Tell the student that you have a concern about a couple questions and would like to clear it up. You can withhold a score in the meantime (as opposed to posting a score of 0). In this way, you technically have not made a direct accusation nor applied a penalty (yet). If the student took the test honestly, they usually acquiesce. If they did not, they usually ignore you, or delay, in which case you can up the ante by going through the Dean's academic dishonesty route.*
- *"any action that would arouse suspicion in an in-person testing environment will be forbidden in the online/zoom testing environment"*
- *You are within your right to ask a student to demonstrate a couple problems either in your presence or one-on-one in zoom, or even ask to have them retake the exam in your presence, if you feel it is appropriate. In such cases, collect your evidence because if the student refuses, we need to be ready to advance this up the chain.*
- *Basically, dishonesty cases fall into two big categories: deliberate premeditation, and opportunistic actions. (The dean divides these into 4 categories, taking into account the "stakes" of the assessment. Since we generally only advance cases involving testing, our cases are almost always high stakes cases)*

This may help:

- *Automatic dishonesty charges (no retake as an option): Covering up the camera, or pointing it away during the duration of the exam; Using a secondary device where you have strong evidence of it, such as a reflection in eyeglasses or appearing in the video; Leaving the room for extended periods; Work on scratch that is obvious plagiarism from the web (e.g. writing log for ln, which is what Wolframalpha does. We catch a bunch this way and cite plagiarism) ... or some other obvious action that required deliberate premeditation.*
- *Potential dishonesty cases (retake of the exam or a demonstration of a couple problems is an option): finishing an exam in 10 minutes with a very high score (and not showing the same mastery on HW); Eyes darting to one area all the time; An improper room scan; Failure to submit written scratch if this is one of your policies; Failure in general to follow the rules ... these cases are often highly suspicious but not slam-dunks. Thus, asking a student to redo a couple problems either clears them quickly, or gives you further evidence of malfeasance, in which case we can bring this up to the Dean.*
- *In the latter cases, you also retain the right, with sufficient evidence and after giving the student a chance to clear their name, to apply a penalty on the result, even a 0. But in these cases, we still need to make the Dean's*

office aware, because the students often will take it to the next level on their own. However, if we can show we gave the student an extra chance and also show our evidence, the Dean's office almost always supports us without further actions needed.

If you encounter a suspected dishonestly case, let Scott Surgent know because he can guide you. He knows what the dean's committee looks for. These are often unpleasant situations so don't be afraid to ask for help.

How to Hold Office Hours

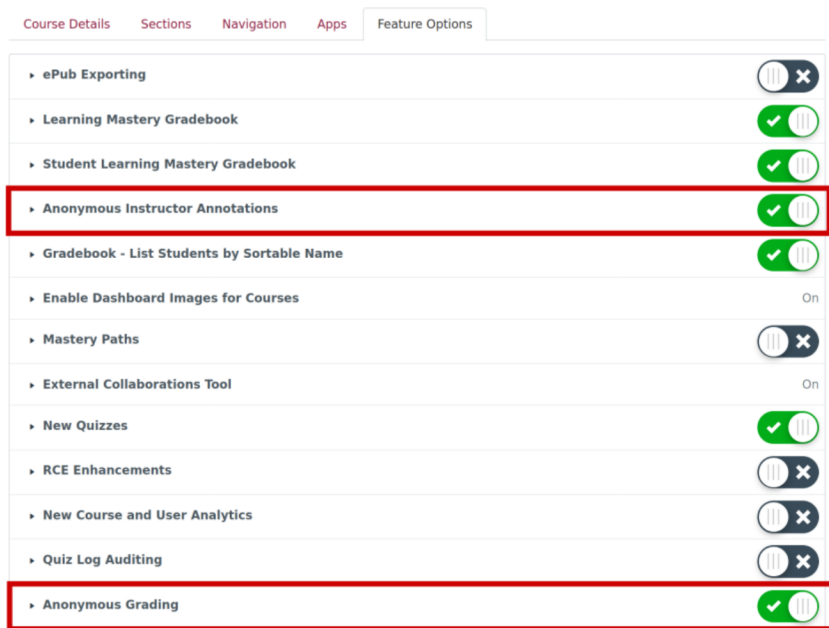
- Reserve room ECA 216/217 for office hours.
 - Students and faculty are NOT allowed to shutdown computers. They are in use, remotely!!
 - There is a doc-cam in this room as well.
 - There is a Moodle reservation page, so you can reserve the room in 30min intervals.
- Students can ask about particular homework or discussion problems that they have had some questions about using Zoom.
- The Window's whiteboard and/or the Zoom whiteboard are very handy for office hours.
- Have students write out their work and hold it up to their camera. You generally can see it well enough to give feedback. If the work is more involved, ask them to take a quick picture and e-mail it to me. The upload is quick, and you will usually get it within a minute or so and can look it over and give immediate feedback. While not ideal, this system has been working pretty well.
- Here is a recent tutoring session that I held via Zoom where I am using a pen-pad to annotate the whiteboard, and the student is just describing the questions and interacting with me as we go through the analysis. (I have broken the session into two files so that the upload is easier.)
 - [Sample whiteboard tutoring / office session with student - Part 1](#)
 - [Sample whiteboard tutoring / office session with student - Part 2](#)
- As the video snippets show, when the tutor or instructor conducts the session by referencing specific homework problems, the overall structure of the questions are readily and immediately available to the tutor and the student. This serves to reduce the need for the student to describe the problem to merely the need to tell the teacher or tutor what the randomized parameter values are for the version of the problem that the student is working with.

How to Use Your Instructional Assistant(s)

- We are expected to keep our graders anonymous to students. Canvas has a feature called "anonymous grading". The term is unfortunate and confusing. It refers to student names being anonymous to graders. This is to prevent bias based on names that suggest a gender, nationality, etc. It does not mean that graders are anonymous to students.

To make graders anonymous to students, one has to go Settings / Feature options and enable the switch *Anonymous Instructor Annotations*. This permits anonymizing "instructor" (teacher and grader) **annotations in the doc viewer**. (Graders can also leave text comments in the *assignment comment box*, but those are always attributed. **It is important to tell graders to use the annotation feature only.**)

It is a good idea to enable and use both anonymous instructor annotations and anonymous grading.



After enabling the options for the course, you still have to edit each assignment to activate them (see next page).

Peer Reviews

Require Peer Reviews

Moderated Grading

Moderated Grading
Allow moderator to review multiple independent grades for selected submissions

Anonymous Grading

Graders cannot view student names

Anonymous Instructor Annotations

Anonymize all annotations made by instructors on submissions for this assignment in DocViewer

Assign

Assign to

Everyone x

There is also a tutorial video on this: <https://lms.asu.edu/how-set-and-use-anonymous-instructor-annotations-0>

- Can grade assignments & quizzes submitted through SpeedGrader.
- Can maintain Zoom office hours- students do attend these.
- Can review the discussion forums and answer questions.
- Check that student's written work on exams was uploaded correctly and submitted on time.
- Reminder, in your presence (even zoom presence) they can help grade T/F and multiple choice on tests.
- You need to physically hand papers to be graded to your IA. This helps with "lost" papers.
- Be mindful of information sent to you from GIA@asu.edu regarding IA & Grader responsibilities.

How to Help Your Students

Students Attending Class

How will students attend class?

To access live sessions of your class students will go to myASU and click the "Attend via Sync" button on their schedule.

The "Attend via Sync" button in the students' myASU schedule will direct to the instructor's PMI. If you would like them to attend via a different room, you need to communicate that to students before class meets for the first time.

Class #	Course	Title	Units	Instructor(s)	Days	Times	Date(s)	Location	Actions
90030	BME 111	Engr Perspectives/Biologic Sys	3.0	Massia			8/20/20 - 12/4/20	iCourse	
77263	CHE 334	Intro TP & Heat/Mass Transfer	3.0	Holloway	T Th	3:00 PM - 4:15 PM	8/20/20 - 12/4/20	Tempe LB C14	Attend via Sync
70464	CHE 342	Intro Applied Chem Thermodyn	3.0	Jin	M W	9:00 AM - 10:15 AM	8/20/20 - 12/4/20	Tempe SS 229	Attend via Sync
90429	CHE 342	Intro Applied Chem Thermodyn (Recitation)	0.0	Jin	F	9:00 AM - 9:50 AM	8/20/20 - 12/4/20	Tempe PSF 123	Attend via Sync
84731	CHE 384	Numerical Methods Chem Eng	3.0	Muhich	T Th	10:30 AM - 11:45 AM	8/20/20 - 12/4/20	Tempe CDN 68	Attend via Sync
70512	CHM 233	General Organic Chemistry I	3.0	Gould		12:00 AM - 12:00 AM	8/20/20 - 12/4/20	iCourse	
73914	CHM 237	Gen Organic Chemistry Lab I (Lab)	1.0	PI&I, Staff	Th	12:00 PM - 2:50 PM	8/20/20 - 12/4/20	Tempe PSH 332	
75750	ARS 201	Art of Asia	3.0	Deacon		12:00 AM - 12:00 AM	8/20/20 - 10/9/20	iCourse	
Total Units: 19.0									
Add/Shopping Cart Drop/Withdraw Swap Edit Weekly View Grades View Books iCal Download Print my Schedule									

Student Resources

- Disability Resource Center (DRC)
<https://eoss.asu.edu/drc>
- Veterans Pat Tillman Center
Apply to DRC for support in the classroom
Life had been structured
<https://veterans.asu.edu/>
- ASU Counseling Services
<https://eoss.asu.edu/counseling>
- ASU Health Services
<https://eoss.asu.edu/health/contact>
- Career and Professional Development
<https://career.asu.edu/>
- Student Advocacy & Assistance
<https://eoss.asu.edu/dos/srr/StudentAdvocacyandAssistance>
- Student Responsibilities and Rights
<https://eoss.asu.edu/dos/srr>
- First Year Success
<https://fys.asu.edu/>
- Succeed Inside and Outside the Classroom
<https://eoss.asu.edu/trio>
- Tutoring
<https://tutoring.asu.edu/>
- Breast Feeding Support
<https://eoss.asu.edu/students-families/breastfeeding>