Rowan University

Department of Physics & Astronomy

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Physics & Astronomy Professor Orientation

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While we realize that many of you have extensive teaching experience, and, in many cases, experience here at Rowan, we feel that it is a good idea to review some of those things we may have started to take for granted and give you some points of contact for those times when your best laid plans have gone awry.

First and foremost, your Rowan email address is the primary source of communication with the University and Department. This is how we will contact you, and how you should contact us if you need any help. Additionally, if you are on the schedule for teaching a course, you can expect students to be contacting you directly, even during the break before that semester. We pride ourselves on being a student-centered department, so make every effort to address student concerns within 24 hours. This means checking your Rowan email daily—even during breaks. If you can't do that, set a "vacation announcement"[1] that directs students to contact physics@rowan.edu. For students needing an override into *any* of our introductory courses, have them email Dave—enrollments are being managed centrally for these courses to ensure they are equally filled and that none of them is canceled due to underenrollment.

Second, we are working towards a goal of more active classroom learning. What this means is that, even in the "lecture" portion of your class, your students should be working, not passively listening. They should be working at least as hard as you are. You should expect your students to have read the chapter (or portion thereof) assigned so you shouldn't feel compelled to repeat derivations or examples—if you do, your students will simply stop reading the textbook as they will expect that you will be reading it to them via lecture. You'll find all sorts of resources in section 7 "Lecture" below to help you keep your class actively learning instead of just passively listening.

1 University Level Information

The primary place for faculty information is the at the Provost-Registrar web site—it will be the follow-up point for some of the information below. Be sure to go to the site to download and read the Faculty and Professional Staff Handbook; the link is about halfway down the page. You can also get some useful information from the HR web site, such as the New Employee Orientation for Adjunct Faculty document (or the New Employee Orientation for Faculty and Staff handbook). They also have new employee training documents. Note that all employees **must** complete the **mandatory** Preventing Employment Discrimination online training. Just click the link and go through the pages (about 45 minutes). You only have to do it once so if you've already done it at some point in the past, you're good.

If you are brand new to campus, as part of the hiring process you will be given a Rowan username which allows you to receive e-mail on Rowan servers, login to any of the instructor podium computers (or any classroom computer), and connect to the network drives. The default password will be your BannerID number with `Pw` appended to it; once you login, you can go to the Rowan Network Account Access site to change it. You'll also want to make sure to get your Rowan ID card (Info Desk in Student Cener) and (free) parking permit.

Important: Once you have your Rowan username, be sure to notify Dave (just send an email from your new account) so that he can list you on the Faculty & Staff page and give you access to the Files for DPA Faculty on the department web site.

Finally, many sites related to student information require login using your Banner ID and PIN, which are distinct from your Rowan username and password—because, what's the fun in centralizing your login to make life easier if you don't have at least one illogical exception?! Of

[1] To set this, login to Outlook Web Access, click on `Options` at the top, click on `Out of Office Assisstant` from the left menu and fill it out

course, if you ever forget your Banner ID and PIN, you can get them at your My Banner site by logging in with your standard Rowan username and password. For more information on the use of Banner (class list confirmation, grades, etc.) just go to the Banner Student/Faculty site from the IR Training site. As an aside: they offer all kinds of classes for faculty and staff that cover a whole host of software and software packages—it's a great site to just browse around to see what they have to offer. In addition, Rowan has an organizational license to professional online training courses through lynda.com which can provide you with training on just about any software package you can think of. You can get login details from the IR website.

2 People to Contact

David Klassen, Interim Chair (x4391, `klassen@rowan.edu`); Jeff Hettinger, Associate Chair (x4397), `hettinger@rowan.edu`); Don Farnelli, Astronomy Coordinator (x4379 , `farnelli@rowan.edu`); Tracie Shorter, Secretary (x4855, `shorter@rowan.edu`); Ron Bruner, Lab Coordinator (x4303, `brunerr@rowan.edu`); Smart classroom tech hotline (x5552 — it's voice-mail but be sure to leave a message since it immediately gets sent out to the closest available tech).

3 Course Syllabus

Your syllabus is, in effect, a contract with your students. You can find syllabus requirements at the Provost's Office web site; just look for the `Classroom Polices` link, and on that page look for the `Syllabus Policy` link to download it. In an effort to save paper (and thus departmental costs) we ask that you *not* print out copies to give to your students in class but instead, post it on your BlackBoard site (see 6 Online Resources below). ***Be sure to e-mail a copy of your syllabus to Tracie for our files/archive.*** If you want a copy of a past syllabus, or a "generic" one for reference, just go to our online Syllabus Archive.

Note: when sending a copy of your syllabus, we ask that you send a PDF format version and that you name it in the following manner so that it will show up properly in the syllabus archive: `course-yyyys-name.pdf`. Where `course` is the name of the course (e.g. `intromech`, `introem`, `phys1nc`, `phys2nc`, `pel`, `astron`, etc.; see the archive for more examples), `yyyys` is the four digit year and semsester (`f` for fall and `s` for spring), and `name` is your last name. The file name should be all lowercase letters.

4 Finals Week

Some time within the last month of classes you and your students will receive an email from the Registrar letting you all know the date, time, and place of your final exam. Note that, as per the Rowan University rules: "The academic semester shall consist of a minimum of 15 weeks of instruction, inclusive of testing. Every effort shall be made to insure that 75 days of instruction, inclusive of finals week, are provided and no semester shall have fewer than 74 total days. . . Finals Week, in both the Fall and Spring Semesters, will last for five days and constitute the 71st through 75th days of instruction."

This means that *all faculty* are *required* to use the time during final exam week for instructional purposes in a fashion that is equivalent to the scheduled instructional period. This need not necessarily involve a final exam or a formal meeting, but it should be meaningful within the context of the course.

Also during this time you may contacted by several students about finals conflicts or telling you that they have other finals that day and would like to reschedule yours. First, conflicts are *very* rare—they are based on the course day and time so unless they have two classes at the same time, odds are, they don't have two finals at the same time—unless some other professor has tried to unofficially change the time of their final. You are under no obligation to adjust your final for a student due to someone else not playing by the rules. What you should do: 1) ask the student for the course number and professor of the conflicting course; 2) check Banner for the course to see if the officially scheduled final really does conflict. 3) If it does not, have the student negotiate with their other professor. If it doesn't, then you, the other professor and the student will need to find a solution—the registrar and administration will *not* involve themselves in this. Short of an actual error on their part, they consider the matter your problem.

For the case of a student with more than one final in a particular day, the administration does not consider that a hardship unless the student has *more* than three finals in a day. I personally feel that two is more than enough for a student in one day and would encourage you to make accommodations for students with three in one day if it is at all feasible. One solution is to find someone else who has a final later in the week and see if they an handle one more student in their room and would be willing to give your final to them. Similarly, I would ask that you please consider doing this for others who may ask you.

5 Smart Classrooms

All classrooms are equipped with about 12 student computer stations, an instructor computer at the podium, and an LCD projector. All computers use your Rowan username and password for login. The projector is controlled through the touch panel on the podium—just touch it and it will boot that system. ***Be sure to log off the computer and exit the projection system before you leave the room at the end of class.*** Make sure you use the "log off" command, not the "shut down" command, otherwise the next instructor will have some delay while waiting for the system to boot back up.

All computers include: MS Office, Adobe Reader, Chrome, Data Studio and/or Capstone (for physics labs using PASCO equipment), and various CLEA labs (for astronomy). If there is some particular piece of software you feel should be part of our base system, please let us know.

You can use the computer+projector to show lecture notes, demonstration applets, DVD-based demo videos, etc. Students can use the computers to collect and analyze lab data, work through computer-based demos, labs, tutorials, etc. With all of these tools, many free from the textbook publishers, the classroom experience can (and *should*) be made active and engaging; note that simply putting lectures on electronic presentation slides (e.g. PowerPoint) is *not* the same as active engagement—in the classroom, ***students should be working as hard as you are***.

If you have any difficulties with the smart classroom equipment, you can call the TEC hotline number (x5552) taped to the top of the podium near the phone. You will most likely *not* get a live person, but ***be sure to leave a message***—it will be e-mailed to the closest current tech on duty and they will respond ASAP. For more info, including a tutorial and a Quick Start guide, see the TEC room web site.

6 Online Resources

6.1 Homework

The textbooks we have adopted for our introductory level physics and astronomy courses come with an online homework system. You will receive login information either in e-mail or on a card with your text; if you don't, contact Jeff.

These online homework systems have the advantage of allowing you to assign homework that will be graded for you (scores are downloadable for importation into whatever program you use for your gradebook); for the student, they have the advantage of giving them instant feedback on their progress. If you have any questions about these systems, contact Dave.

The publishers also provide web sites with online tutorials, Java and/or Flash based interactive demos and "experiments", etc. These are great in-class tools for your students to experience physics. Some of these are available through the online homework system web site for ease of use.

The current system being used for introductory physics classes is Pearson's MasteringPhysics. If you already have an account, you can simply create your new course and be off and running. If not, just click the `Instructors` registration button and follow the directions there. The departmental instructor access code can be gotten from Jeff.

Our descriptive physics course, Physics of Everyday Life, does not make use of an online homework system.

Important: There are now several sites out there that have full solutions to pretty much all published homework problems in all published texts. Good students will not make use of them, but others will. Due to this, we suggest that homework for intro courses no longer make up the majority of a course grade—perhaps no more than 15–25%.

6.2 Classroom Management—BlackBoard

You should make use of the University's BlackBoard online course management system. **To get your shell course created**, login to Banner, click on `Faculty Services`, then on `Learning Management System Course Requests` . Once you choose your semester/year, you will see a list of all the classes assigned to you for that term. Just click the `Request Export` button next to each one you want a BlackBoard course for. You will receive an e-mail message letting you know when your course is ready. You can then login and begin designing your course; there is extensive online information, help, training sessions to get you started; or contact Jeff or Dave for more ideas and/or help. Note: if you have used BlackBoard at Rowan before and have a course design you like and want to recreate in your new course, you can download the Copying a course instruction handout from the information site.

Once logged in, the home page should show your BlackBoard Tools, Announcements, Calendar and list of courses. Just click the link for your current course and you are off and running. This system allows you to distribute documents (syllabus, solution sets, handouts, etc.), contact your class all at once, leave class announcements, etc. You can also use it for setting up online "recitation" sections through the discussion boards, or even group lab notebooks using the wikis.

6.3 Other

For departmental administrative materials, there is a link at the bottom of the department site Faculty & Staff page for Documents and files—it will require login with your Rowan username and password. You'll find there a copy of this document, links to our class subject-matter topics, lab manuals, demos, etc.

For ideas on things you can do in class, there is a general physics resource called Compadre. To start exploring that site, just click on one of the two `Faculty` tabs and have at it. If you make a free account, you can even store things you find in folders—so you could create a folder for your class, put things in there that you want to use, and just call them up again each following semester. For other instructional advice, the CU Physics Education Research (PER) group, has a great site.

7 "Lecture"

Work in PER has continually shown that the traditional method of "stand up and talk at the class mostly repeating what was in the textbook" only works for a very small percentage of students. In order to get more actual learning done in class, these studies show that your students must be engaged—they must be *doing* physics and not merely hearing about it. A rule of thumb: your students should be working in class at least as hard as you are.

7.1 Conceptual Learning

There are many PER groups now and each has created methods to help the rest of us create a more engaging classroom. One of these well tested techniques is called Peer Instruction which involves having your students analyze well-designed multiple-choice conceptual questions and discuss that analysis with each other and then answer through voting. As many places doing this use technology use a hardware-based response system—clickers—these are usually referred to as "clicker questions".

The PER group at CU has a great page of clicker resources, including a short paper on why and how best to use them. For clicker questions, check out the OSU PER group, the CWSEI, The Physics Suite, and smartPhysics. In addition, our textbook publisher has a set of them you can download from the `Instructor Resources` link on Mastering.

Our campus does not have a campus-wide hardware student-response system, but we have adopted a software solution that lets students use their smart phones, tablets, or laptops to vote. The system is called Poll Everywhere. It is fairly new and there will no doubt be instructional courses for it. In lieu of that, you can get your students to vote by show of hands and tallying them on the board or by having them use colored cards/paper (so you can get a sort of visual histogram idea of where they are). There is also an all-software solution called Socractive—you and your students simply install a free app on an iOS or Android device, or just use a web-browser on their laptop. The students' devices become the clicker and your device keeps a histogram tally of responses. Unlike Poll Everywhere, it is faster to set up and use, however it does *not* keep any logs or statistics—it is very bare-bones.

As students are discussing, you can wander around the room to listen in on their reasoning and gauge where students are as far as mastering conceptual understanding. It also can give you insight on what they are not getting and why. If some concept is still baffling over half the class, you can spend about 10 minutes (any longer and you've lost them) lecturing about it. Or assign some problems or videos for homework.

7.2 Problem Solving

Since conceptual understanding is only half the story, you can also use lecture time to have students work problems. One way to do this is to create Practice assignments in Mastering, then project the problems one at a time and have students work on small groups to solve them. When they have answers, you can have them tell you, you type it in and have the system check. Then take a few minutes to note why it was right and/or wrong.

You can also create more meaningful problems—known as "context-rich"—which require students to think more deeply. These types of problems often require students to make assumptions and/or estimations in order to proceed. For some resources check out New York Times Physics, or the UofMN PER group's archive.

7.3 Demos

Sometimes a concept can be difficult even for non-novices to really "see" without, well, actually seeing it; reading about it alone, even with (static) diagrams, graphs, and pictures, is just not enough. That's when we can turn to demos. We have an extensive set of demos, each of which has a short write-up describing where all the equipment is located and how to run it. You can order them using the Lab/Demo Request sheet so they can be ready and waiting for you by class time.

However, PER studies have shown that if a Demo is merely used as classroom theater, students will rarely get anything practical from it. They may remember the demo itself, especially if it was particularly theatrical, but quickly forget the point—the physics you were attempting to demonstrate. The answer is to make your demos interactive. The key is to have the students make predictions after you have described the set-up and what you are going to do. This can be done as a dedicated clicker question, or as a fill-out worksheet. Then you do the demo and lead discussion on *why* what happened, happened.

If we don't have the equipment necessary for you to do the demo in class, we have "The Video Encyclopedia of Physics Demonstrations" (600 demos on 25 DVDs) on shelf N1 in room 136. A listing of these demos, by category, is available in the Index with the set. Additionally, one can use online video demos. The publisher of our text has a library of demos which you can access by clicking the `Study Area` link in Mastering, then click the `Video Tutor Demonstrations` link. There is also a set of videos from the Rutgers PER group. Or you can do a search on YouTube (just be sure you have the "Safe Search" turned on as you don't want anything inappropriate showing up in your class).

As an alternative to demos, you can use computer simulations (sims). A great resource for these is PhET or you look around at Compadre. In the case of sims, you can have the students just play with them with just a little direction (e.g. "Figure out how lens properties affect the focal length of the lens"). A subset of sims is just computer animations—which are not quite as in-depth as a full-fledged demo. Think of them as more like a picture from the text, but in motion to better illustrate a point. Some resources include Wolfram Deomstrations, ActivPhysics, and the PSU Physics Animations. If you want to roll-your-own animations you can try out VPython—they do include many pre-coded examples, but otherwise, have fund with coding!

7.4 Reading

Of course, none of the above will work if students don't read the textbook. In order to get them to do this it is recommended that you tie some kind of grade to this—the easiest way is to just have a short (2–3 question, less than 30 minute) reading quiz. Mastering even has items labeled `Reading Questions` so you can build short assignments for them to complete before class. You can then

assume that they have done the reading and so only need to actually cover those parts the students didn't understand (so you'll need to be able to review those reading quizzes before class) instead of rushing to try to "cover" everything. Although it may seem too obvious, simply asking them to write about what they had the most trouble understanding (or what they found most fascinating) *and why* does work. But you have to be sure to give them scores that encourage deeper thought—a simple "I didn't understand anything" should get about a 70–75%; if they add "...in section 14.6 and 7" that can be 80–85%. You really want them thinking about what they don't understand.

8 Labs

Lab activities for physics are posted on the department web site online lab manual; students can go to Physics home page, click on `Current Students` from the left-hand menu then click the `Lab manual for Introductory Physics` link. To download the individual lab write-ups, everyone will need to enter their Rowan username and password. ***You should have your class do at least 10 labs during the semester***. We have a multitude of probes and equipment even beyond those used in our standard labs. If you would like a tour and overview of the equipment or a mini-tutorial on how to use the systems, contact Ron. For standard astronomy labs and demo ideas, you can contact Don.

Ron will distribute a Lab/Demo request form to your mail box (or you can get a copy of it from the Files for DPA Faculty web page). Please submit the form to him at least one full week prior to the date you need any equipment. An instruction sheet is provided with these forms. Your equipment will be placed on a cart in your room with your sheet to identify it. ***You can use the sheet to provided feedback on the lab activity*** or just e-mail Ron.

9 Class Lists

Federal regulations related to financial aid ***require every professor*** to verify that registered students have actually attended class. This must be done as soon as possible after the 10th day of class and is completed online. Just go to the Provost-Registrar web site and click on `How to Verify a Class List` (PDF document) for instructions.

If you want a copy of your own class list you can get one from Banner. Just login to the secure area, click on the `Faculty Services` tab and there are links near the top for `Detail Class List` (which gives you an expanded record for each student) or `Class List` which gives you a more condensed listing. Note that at the bottom of this page is a link you can click to email your entire class. Very useful (until you set up your course BlackBoard page, at which point, that's easier). If you'd like, there is a link about halfway down the page for `Photo ID Class Lists` which is extremely useful in helping you match faces and names—you'll have to search for your class from a list of *every course* offered that semester.

10 Grading

Rowan has set up an online system for professors to submit their grades. Go to the Provost-Registrar web site and click on `How to Post Final Grades` (PDF document) for instructions. Note that these are, indeed *final* grades—once you submit them they are set and you will have to contact the Registrar to make changes.

11 Photocopying

Due to continued budget stress, photocopying ***must*** be kept to a minimum—it costs us 8 ¢ per page-side when you use the photocopier (so a 4-page, duplexed, handout for 26 students comes to $16.64; for 30 faculty, 3/year that's about $1500!). Thus department policy is that ***all handouts should be distributed to students as electronic documents through your course BlackBoard page*** (see 6 Online Resources above) and if they want a hardcopy, they can print it at their own expense. If your particular handout is not an electronic page (e.g. handwritten homework solutions) there is a scanner in the adjunct office you can use to make it into one; you can ask Dave for assistance if needed. *Note: I strongly recommend using the PDF file format for document distribution since it cannot be readily edited by the recipient.*

If you absolutely must hand out a hardcopy (e.g. exams) the best method is to simply print them which only costs about 1 ¢ per page-side. Printing can be done from the computers in the Adjunct Office (SCI 154; this is a duplex printer so you can print double-sided pages). Granted, the printer can only collate, not staple, but you can just have the students staple them as they hand them back in. The second best method is to use the Duplicating Center which costs us a bit over 3 ¢ per page-side. For instructions go to their web site *early* in the semester to get an account and familiarize yourself with their procedures—if you wait until the day before you need a job done, it won't happen. ***Note that all jobs must be pre-approved by the department chair.***

12 Course Info

The department web site has a page with the catalog descriptions of all our courses so you can check there for the official description of your course. For our introductory physics classes we also have a page of subject matter topics; these usually correspond to chapter titles in the major textbooks. There is another version in outline form that includes the suggested amount of time per topic. Note: for most of them, it is two lectures, one lab. As students should be reading the chapters, there is no need to "read the chapter" to them via topic-by-topic straight lecture.

For astronomy there is (currently) no set curriculum other than to say it is a survey course and most likely the *only* lab science course the students are taking. So the course should be more about scientific processes ("how" we know) than simple inventories and objects ("what" we know) and that the labs should be exercises that demonstrate the scientific method, give students a chance to collect, analyze and model data, and give them an understanding of experimental error. That is, they should be "doing" science, not just "hearing about" it.

Finally, be sure you are using the entire class period. In general, you should not be starting late or letting students out early—students have paid for their 90 hours of classroom instruction so they should be getting all of it. Additionally, for the "double-period" classes, you should not just skip the break in order to start late or end early. Even though this schedule does give the students their entire instruction time, pedagogically this is a bad practice. Going straight through without any break will tax the attention spans of even the most dedicated students and their learning will suffer accordingly.

13 Evaluations

As part of our mission to provide an excellent learning environment, all adjunct professors will be evaluated by their students (each course, each semester) and the department (once-per-year for first three years then once-every-three-years thereafter).

Student evaluations *must be done at some point in the last five weeks of the semester*. Due to recent unilateral changes, and the decision by Rowan's Enterprise Information Services to no longer support individualized student evaluation surveys, we have moved our form to the SurveyMonkey online service. You must contact Dave to set up your student evaluation. In order to make sure students take the survey, you should set it up to be taken during class time and have someone come in to proctor for you—you cannot be in the classroom while they complete the survey. It would be best if you can coordinate with someone who teaches at the same time, then you can simply swap classes for the 15-ish minutes. If you can't do that, contact Dave in order to find a time when he can, or find someone else who can, proctor your evaluation.

Once you have submitted your grades and the deadline for grade submissions has passed, your results will be emailed to you and the department chair as a PDF report. You may then submit any official response to the survey results and that will be placed on file with them.

If you wish to see a copy of the evaluation questions, just contact Dave.

Your department observation can be done at any time during the semester with the exact date to be worked out by you and your evaluator. The evaluator (usually Jeff) will quietly observe the class from beginning to end making notes on teaching style, student-teacher interaction, etc. along with a general description of what happened in the class. Assessment is made based on the department's Criteria for Evaluating Teaching Effectiveness (see excerpt below). This evaluation will be placed on file and a copy will also be given to you. As with student evaluations, you may submit a response to the peer evaluation for your file.

All evaluations are coordinated by Jeff; *contact him to set up the date and time.*

If you have any questions regarding anything here, or have suggestions of what we can add or do to provide you a better orientation, please contact Jeff or Dave. Have a great semester!

DEPARTMENT OF PHYSICS AND ASTRONOMY

CRITERIA FOR EVALUATING TEACHING EFFECTIVENESS

Teaching is the primary function of faculty. Faculty members are expected to facilitate learning, manage instruction, and supervise students (See Appendix A §1.1 of the Recontracting & Tenure Memorandum of Agreement). They must also advise students, develop learning activities, and develop as a teacher. The evaluation procedure will include classroom and/or laboratory peer observations, student evaluations, course content, advising activities, and a statement by the faculty member which includes a self-assessment and a professional development plan.

PEER CLASSROOM OBSERVATIONS ASSESS:

- Mastery of subject matter discussed
- Interactions with students: rapport, sensitivity to students' difficulties, impartiality, respect, humor, flexibility, and avoidance of sarcasm.
- Classroom presence: awareness of physical conditions in classroom, avoidance of distracting behavior and mannerisms, awareness of students as a group and as individuals, enthusiasm for subject taught, and interest generated in subject matter.
- Organization and technique: development of presentation, board work and use of other teaching aids, planning of assignments, encouragement and handling of questions from the class, ability to stimulate thinking, flexibility in use of techniques and materials, and use of illustrative examples.

PEER LABORATORY OBSERVATIONS ASSESS:

- Mastery of subject matter discussed
- Interactions with students: rapport, sensitivity to students' difficulties, impartiality, respect, humor, flexibility, and avoidance of sarcasm
- Laboratory presence: Awareness of physical conditions in the lab, avoidance of distracting behavior and mannerisms, awareness of students as a group and as individuals, enthusiasm for subject taught, interest generated in subject matter, and adherence to safety rules.
- Organization and technique: Development of presentation (if any), board work and use of other teaching aids, planning of laboratory experiments and evaluations, encouragement and handling of questions from the class, ability to stimulate thinking, flexibility in use of techniques and materials, and use of illustrative examples.

USE OF STUDENT EVALUATION DATA AND RESPONSE

- The department uses the online Banner student evaluation form and its standard procedures for deployment and reporting. The survey is modified by the addition of two statements for the students to evaluate: "16. The instructor's use of class time (e.g. office hours, e-mail, BlackBoard, etc.)" and "17. The instructor's use, and teaching of, proper safety protocols in demos, activities, and/or lab."
- Overall rating of the quality of instruction in the course should be rated at least 4.0 out of 5.0 on the Banner Student Evaluation Form. If it is less than this, the candidate must address the reason(s).
- Candidate's response must address all other specific scores less than 4.0 out of 5.0.

DEPARTMENT OF PHYSICS AND ASTRONOMY

EVALUATION OF COURSE CONTENT

- Syllabi should reflect the Department's collective decisions concerning multi-section courses. Such decisions may include items such as curricular content, laboratory experiences, texts, and goals.
- Learning activities should have a clear relationship to course and program goals.
- Learning outcomes assessment tools should be appropriate. Such tools might include, but are not limited to, the following: exams, tests, quizzes, papers, reports, projects, lab notebooks, presentations and portfolios.

EVALUATING ADVISING

- The candidate will do a self-assessment of his/her advising responsibilities that may include academic advising, mentoring student research and/or advising student clubs. The candidate should specifically address the issue of developmental advising of academic advisees.
- Student input will be sought through soliciting free-form prose evaluation from selected advisees. The students to be evaluated will be selected from the record of meetings with students provided by the candidate.

EVALUATING THE DEVELOPMENT OF LEARNING ACTIVITIES

- The candidate will do a self-assessment of these efforts detailing course revisions, new materials and exercises, new types of activities, updating course syllabi, updating and developing new curricula, development of assessment tools for learning outcomes, and other aspects that the candidate thinks constitute development.
- Submission of documentation supporting these efforts is necessary. Documentation may include but is not limited to the following: description of activities, new course syllabi, details of curricular changes, student handouts, assessment tools, computer assignments, etc.

EVALUATING DEVELOPMENT AS A TEACHER

- The candidate will do a self-assessment of these efforts including attendance/participation in development activities and learning communities of the University, region, and world, maintenance of currency in coursework and pedagogical practices, demonstrated acquisition, trial use, and sharing of knowledge of new pedagogical techniques and knowledge within the faculty member's field of expertise, to help meet the department's mission and goals.
- Submission of documentation supporting these efforts is necessary. Documentation may include but is not limited to the following: description of activities attended, letters of support from collaborating faculty, descriptions of new knowledge acquired and how it was applied to courses.