2015 - 2016
Ecology & Evolutionary Biology
GRADUATE PROGRAM HANDBOOK
EEB Faculty Committees (2015-16)

Graduate Advising and Curriculum Committee:
Rudolf (Chair)
Kohn
Saltz

Graduate Grievance Committee:
Farach-Carson (Chair)
Matthews
Miller

Graduate Recruitment and Evaluation Committee:
Rudolf (Chair)
Dunham
Egan
Kohn
Miller
Saltz
Siemann

BioSciences Ombudsperson:
John Olson

Graduate Program Director:
Rudolf
EEB Graduate Student Help Menu

EEB graduate students are welcome to ask any of our BioSciences staff for assistance at any time. This page provides information regarding each staff member's job title.

The first help resource for graduate students is Angel Forward, the staff graduate program coordinator. She will handle all graduate student records, including payroll and travel award applications. Her direct back-up on the staff is provided by Lindsey Hodge and Kimberly Hughes for all matters administrative, such as building access, payroll, insurance, and human resources; and Susan Cates for academic matters such as academic records, advising recommendations, department awards, and scholarships, and how to procure training for departmental equipment. Diane Hatton is the pre-award research administrator who assists students who are applying for independent funding.

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# BioSciences at Rice
## Ecology and Evolutionary Biology Program, 2015-2016

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**Huxley Fellows, Faculty Fellows, and Teaching Staff:**

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1. Introduction

This guide to graduate study in the Ecology and Evolutionary Biology (EEB) Program contains information about exams, monetary support, required and recommended courses, and regulations and rules for the various degree programs. It is intended to supplement the General Announcements by providing a more detailed description of the EEB graduate program.

In addition to being in agreement with the regulation stated in this departmental handbook, students must also be in agreement with the General Announcements and the Code of Conduct.

In case there is conflicting information, university-wide regulations take precedence over department-wide regulations, which take precedence over research group wide regulations.

In doubt, students should seek help at the departmental level (graduate coordinator, director of graduate studies, advisor, and/or department chair) and then at the central administration level (office graduate and postdoctoral studies).

This handbook is the result of an ongoing attempt by the faculty to codify and make readily available to students the rules, requirements, and general approach to the graduate education of our program. Please do not hesitate to notify the faculty about areas that need clarification or strengthening.

- Graduate Student Advising Committee
2. Financial Support

Incoming students who request financial support and do not hold external fellowships will be awarded a nine-month Rice University Graduate Fellowship for their first year of study. Support beyond the first year is extended to all students who remain in good standing in the program. Graduate research assistantships and fellowships are supported by numerous faculty research grants awarded by a wide range of national and private funding agencies. Additional support for the summer is usually available but not guaranteed.

Additional information is available at the Office of Graduate and Postdoctoral Studies financial support page. (http://graduate.rice.edu/admissions/financial_support.aspx)

In this section we will discuss:

i. Fellowships

ii. Research Funding

iii. Bonus Pay

iv. Summer Salary

v. Reimbursements

i. Fellowships

Many of the students in the Biosciences Department have been awarded independent funding from sources such as the National Science Foundation Graduate Research Fellowship Program, other federal funding sources, private funding sources, and university fellowships. Your thesis advisor can help you determine the fellowships for which you would be most competitive. (Be aware that the NSF GRFP can only be awarded in your first or second year of study, so apply in the fall of both years if you are interested in that fellowship.)

· When you apply for a fellowship please talk to Diane Hatton.

· If you are granted a fellowship please email Connie Myrick. She will begin the paperwork that needs to be filled out.

ii. Research Funding

Sources of funding for student research vary across labs. In some cases, the student’s research is closely allied with that of the Major Advisor and is funded via his/her grants.
In other cases, students will find it necessary to obtain funding from outside sources for particular projects. Philosophies differ across advisors and it is wise to have an early and frank discussion with your advisor about these issues.

iii. Bonus Pay

· Effective in Fall 2010, if an EEB graduate student who would otherwise have been supported by a university fellowship gets stipend support that would not otherwise result in an increase in stipend, their pay will be increased above the department stipend level by 10% of the amount saved by the department. Stipend support from an advisor’s grant does not count. Summer support does not count because the department does not pay summer support (advisors do). Research support (money not for stipend) does not count for bonus pay.

Examples: 1) Student X gets a fellowship that pays for a semester of stipend during the academic year (one-half the amount of the 9-month department stipend). They will have their academic year stipend increased by 10% \(X\) (1/2 of the 9 month stipend).

2) Student X gets a fellowship that pays their stipend for the 9-month academic year. The department is saved the full nine-month stipend, so the new stipend will be increased by 10% of the normal 9-month stipend, to a total stipend of 110% of the 9-month academic year stipend.

3) Student X gets an NSF GRFP award that increases their stipend to $32,000 per year (calendar year - not academic year). The 9-month academic year stipend in this case would be $24,000. If this amount exceeds 110% of the normal 9-month stipend, then the student will get no additional money from the department. Otherwise, the student will receive the amount from the department to bring them up to an academic year stipend totaling 110% of the normal 9-month stipend.

There might be situations more complex than these but we will attempt to apply the spirit of the policy in each case.

iv. Summer Pay

· Nine months of your salary comes from either the department, a fellowship, or your advisor.
· The cost of living is not guaranteed.
· Summer salary typically comes from your advisor’s research or start up fund.
· Summer salary is not guaranteed; it depends on available funds, your progress and is up to your advisor.
· Summer salary is usually arranged in the spring semester
· If you do not get summer salary, you will not get a paycheck for up to three months.
v. Reimbursements (Angel Forward, X4230)

- Please check with Angel before expending your personal funds on research or travel. Often, these expenses can be borne directly by the department and the student won’t have to wait on a reimbursement.

- Please see Chapter 3, Graduate Student Travel before planning any travel.

- In the case where you can’t avoid reimbursements for research expenses, bring Angel your itemized receipts signed by your advisor, noting the fund the expense that should be charged to and the reason for the expense.

- Be sure no sales tax (if purchased in TX) is charged. A sales tax exemption form can be found on the Rice University website (http://professor.rice.edu/Templates/Controller.aspx?id=7013)

- If Texas sales tax is charged you will be responsible for paying the tax.
3. Graduate Student Travel

Graduate students can apply for the “BioScience Graduate Student Travel Award” to support travel to scientific meetings (e.g. conferences, symposia, workshops). The department will, when funds permit, pay a minimum of $250 per student - depending on the available funds and number of applicants in a given year - for out of pocket expenses (in the categories of transportation, shared lodging, and registration). If more students apply than funds can support in a given year, students will be prioritized based on seniority, academic standing, time of last travel support, and importance of the meeting for the professional development of the student.

The graduate program coordinator will issue a call for travel award applications to encourage students to apply for any conference travel anticipated in the coming year. When they receive the email reminding them to apply, students should ask their research advisors if they recommend a particular conference.

To be eligible for this support, the student must submit at least one other travel award application for a conference travel award, a Rice Graduate Student Association travel award, or a Rice Institute of Bioscience & Bioengineering (IBB) travel award. Links to the Rice resources are provided in Chapter 13, Student Resources.

Students are expected to present at the meeting (talk or poster presentation), apply for any available travel stipends/awards available through the respective meeting, apply for any student awards associated with the meeting (e.g. best presentation), provide a brief (<500 words) description of (1) how their work is independent from any research grants of their advisor, and (2) why they chose that specific meeting and what they intend to gain from it. These statements must be submitted together with a Graduate Student Travel Form to the graduate coordinator. (See appendix pg. A-3 for form)

If granted travel support, select your plane itinerary and find the link for your conference registration and hotel, then make an appointment with the graduate coordinator to charge these expenses directly to the department. (The coordinator does not fill out your online forms; she just enters the credit card information in the payment section.) In general, students are not allowed to use per diem on student travel in the Biosciences Department. If you have travel that is funded by a research grant or fellowship that requires per diem travel, you can request an exception to this rule prior to when the travel occurs.

To have an expense reimbursed you must bring an itemized receipt, a credit slip will not be accepted. If you are traveling in the state of Texas and need to stay overnight you must bring and use a Texas hotel occupancy tax exemption certificate.
4. Department Vehicles

To drive a department vehicle you MUST:

· Fill out a Motor Vehicle Record Check (MVR) form that allows Rice to do an investigative consumer report that would reveal any records concerning any driving, criminal history, credit history, and civil record. Return form to Angel (Graduate Coordinator) who will send it to the Department of Risk Management.

· Take a defensive driving course and pass. Speak to the Graduate Coordinator about registering for the course through Idrivesafely.com.

· If you get in an accident while driving a department vehicle please notify the Biosciences office staff immediately.
Progress review committees in the Ecology & Evolutionary Biology program must have at least 4 members.

Three of the four must be EEB Faculty members; this includes professors, associate professors, assistant professors, and faculty fellows. The fourth member must be an outside member, i.e., a faculty at Rice with a primary appointment outside the Department of BioSciences.

Huxley Fellows can be members with approval from Grad Studies. But note that Huxley Fellows often have tenure of three years or less.

Professor Nakhleh may be used as an internal or external member but cannot be both.

You can have additional members from within Rice or from outside universities with approval from the GSAC. Officially the Graduate Program Director appoints each student’s committee but typically the advisor and student suggest committees. The Graduate Program Director approves all changes to the committee.

Ask prospective committee members if they would be willing to serve on your committee. Once you have decided on your committee members tell the Graduate Coordinator. Your committee can suggest that you take other courses to broaden your knowledge regarding your research.

By the end of your second semester you must have formed and met with the EEB portion of your dissertation committee.

Need outside member ideas?

Common choices are faculty in Statistics, Computational and Applied Mathematics (CAAM), Psychology, and Earth Science (ESCI). Also talk to your advisor and other grad students for ideas.
6. Student Requests To Switch Advisors

Because switching advisors will likely affect progress towards the degree and/or financial support arranged by the previous advisor, students should only consider switching advisors in extraordinary circumstances. However, in rare cases a student may feel that his or her interests could be better served by working with a different advisor. Requests to switch advisors will be handled on a case-by-case basis. The EEB graduate program will endeavor to assist the student; however, the student bears the ultimate responsibility of finding a new advisor.

Procedure:

1. The student should first discuss issues with the current advisor and attempt to resolve any concerns or problems.

2. If the student feels that issues are insurmountable, he or she is encouraged to request guidance from the EEB graduate advising committee members, the department ombudsperson, or the department chair.

3. If the student still wishes to switch advisors, the student should speak with a faculty member whose research interests are in line with his or her interests, who is willing to serve as the student's advisor, and who has funding to support the student.

4. If the student finds another faculty member willing to serve as his or her advisor, the student should submit a petition to the department chair for approval of the change. This petition must have the endorsement of the new advisor.

5. If the department chair approves the switch, the EEB graduate program coordinator will process the paperwork required to change advisors.

6. If a student changes advisors prior to achieving candidacy, the new advisor and the student may wish to petition the graduate advising committee to request a short delay in the timeline for completion of the admission to candidacy exam.
7. GRADUATE PROGRAM STANDARDS

Abstract of requirements

Prior to Candidacy:

• Advising:
Prior to or at the beginning of the first semester, the student will meet with his or her Major Advisor (or provisional Major Advisor) and contact the GSAC (Graduate Student Advising Committee) to see if there are any deficiencies in any subject areas that should be made up in the first year of residence.

• Course requirements:
  EBIO 569 (Core Course in EEB)
  EBIO 325 (Ecology) or equivalent
  EBIO 334 (Evolution) or equivalent
  EBIO 561, 562, 563, or 568 (“Topics courses”)
    must take at least two “Topics courses” before candidacy
  EBIO 591 (Teaching Assistantship) x 2 semesters
  EBIO 585/586 (Departmental Seminar) every semester

• By the end of the second semester, the student must have formed and met with the EEB portion of a dissertation committee. Students must maintain an overall average GPA of 3.0 (B) to remain in good academic standing. In the case where the average GPA falls below 3.0, the EEB faculty can select to place the student on academic probation to allow them time to improve their GPA through additional coursework, or to dismiss the student from the program. In the most common case, students receive academic probation for one semester.

• Petition for Approval of Candidacy
Each thesis student must petition for candidacy. Petitions for candidacy forms are available in the forms appendix, page A-2.

On the form you will need to attach:

• A current transcript (printed from WepApps; see Angel)
• A statement with all applicable departmental requirements for both course work and qualifying or preliminary examinations.
• Program checklist to candidacy to document how you have fulfilled the programs
requirements. (Find on OwlSpace)

Students may take the final oral examination in defense of their thesis only after the Dean of Graduate and Postdoctoral Studies approves their candidacy.

**Advancement to Candidacy:**

- All course and University requirements
- A written dissertation project proposal of 8 single-spaced pages
- An oral candidacy exam must be taken by the end of the 5th semester, which includes:
  a) a talk presenting the student’s research plan;
  b) questions from and discussion with the committee on the student’s research plan;
  c) questions from the committee on general knowledge of ecology and evolutionary biology at the level of an introductory ecology or evolution course.

**Demonstration of Annual Progress:**

- At least one annual dissertation committee meeting
- Participation in Grad Student Science Day
- Attendance at the departmental seminar (EBIO 585/586)
- Completion of annual report

**Dissertation:**

- A PhD dissertation with a minimum of three publishable units
  - An oral defense of thesis

Failure to meet the above requirements can result in termination from the program by the department chair, after consultation with the faculty. More details are found in the Rice General Announcements section on graduate student dismissal (http://ga.rice.edu/Home.aspx?id=2147483680).
Expanded discussion of requirements and suggestions for a successful graduate career

A. General considerations

This document outlines requirements for earning an EEB Ph.D. (and also attempts to present suggestions for beginning a successful career in science). Meeting these requirements is necessary, but not necessarily sufficient; a given advisor and/or dissertation committee will often determine additional requirements above and beyond the departmental minimum. For example, some advisors view grant writing as a fundamental part of graduate science education and will require evidence that a student regularly applies for outside funding. It is strongly suggested that, early in the process, a student talks with her/his advisor (or potential advisors) to understand the advisor’s philosophy and to understand what will constitute acceptable progress in his/her lab. Students should note that there are a number of rules that appear in the Rice University General Announcements that apply to all graduate students but do not appear in this document.

B. Prior to Candidacy

B1. During the first semester, the student will meet with his or her Major Advisor (or provisional Major Advisor) and the GSAC (Graduate Student Advising Committee). The Graduate Coordinator will schedule this meeting. Together the participants will outline a plan for the student’s first year. Goals include a) identifying gaps in coursework and suitable courses at Rice or other institutions to fill these gaps, b) identifying coursework relevant to the student’s research plans, c) discussion of lab arrangements if the student has entered the program without a Major Advisor, d) discussion of research plans.

B2. EBIO 569 (Core Course in EEB) must be taken the first time it is offered after the student matriculates, and the student must receive a ‘B’ or better.

B3. Students who have not yet taken the equivalents (as determined by GSAC) of EBIO 325 (Ecology) and EBIO 334 (Evolution) must do so during the first year, or at the first such opportunity should the courses not be offered during the first year.

B4. EBIO 561, 562, 563, 568 ("Topics Courses"): a student must take at least two of these courses (or the same course twice) prior to achieving candidacy. Frequent participation beyond this requirement is highly encouraged and may be required by a student’s Major advisor.

B5. EBIO 591 (Teaching Assistantship) must be taken twice. When TAing a course you must be enrolled in EBIO 591. A teaching Assistant must follow the same code of conduct that a faculty member would follow.

B6. By the end of the second semester, the student must have formed and met with the EEB portion of a dissertation committee (i.e., at least three faculty from within EEB or BCB). It is the student’s responsibility to schedule this meeting. The external committee member is optional at this point.
Among a student’s goals during the first year should be to think deeply, read broadly, discuss ideas frequently with other students and faculty, develop needed lab, field, and computational/theoretical skills, and begin preliminary research, all in service of developing dissertation project ideas. This is an excellent opportunity in which to talk with different faculty members so that a student will have an informed set of choices for composing a committee. Appropriate committee members are those faculty who think what the student is doing is interesting, and have expertise that will be useful in carrying out the project.

Students tend to underestimate the value of a committee in designing a timely and feasible dissertation. Furthermore, when grant proposals are submitted and upon entry into the job market, students often rely on committee members for letters of reference. Thus, it is important to provide committee members with the opportunity to be familiar and enthusiastic about the topic, design, and execution of the dissertation through frequent meetings.

C. Requirements for Advancement to Candidacy

C1. Completion of all coursework requirements described in Part B; coursework required by the student’s Major Advisor and/or dissertation committee, and all University requirements for candidacy.

C2. A written dissertation project proposal of 8 single-spaced pages, excluding references and figures. A suggested format is the NSF Doctoral Dissertation Improvement Grant (DDIG). The goals of this proposal are a) to ensure that students embark on their dissertation research with clearly-formulated questions and a plan, b) to present this plan to the committee in a comprehensive way, c) to develop general written communication and grant-writing skills, and d) to give the student a head start on applying for the DDIG or other potential sources of research support. Proposals should include preliminary data. It is strongly suggested that a first draft of the proposal be given to the student’s major advisor 60-90 days prior to the expected date of the candidacy exam. By doing so, a student increases the chances of producing a high-quality proposal and should be able to avoid last-minute postponements of the candidacy exam. The proposal must be approved by the student’s Major Advisor prior to distribution to the dissertation committee, and the committee must receive the proposal no less than 2 weeks prior to the date of the scheduled candidacy exam. A copy must also be given to the Graduate Coordinator by the day of the exam.

C3. An oral candidacy exam must be taken by the end of the 5th semester. The exam includes a) a required talk (suggested time: 20-30 minutes) presenting the student’s research plan; b) questions from and discussion with the committee on the student’s research plan; and c) questions from the committee on general knowledge of ecology and evolutionary biology at the level of an introductory ecology or evolution course. It is the student’s responsibility to schedule the exam after coordinating with the dissertation committee. It is highly suggested that the student meet with each of his or her committee members individually, at least two months prior to the scheduled exam, to find out their expectations on what constitutes general knowledge and to get their suggestions for readings.
Students not passing the exam on the first attempt will have one opportunity to retake the exam; this second attempt must normally occur by the end of the 6th semester. On a student’s first exam, the outcome will be either “Pass” or “Retake”; on a student’s second exam, the outcome will be either “Pass” or “Fail”.

Under extraordinary circumstances, a student may petition the GSAC for an extension of the candidacy exam deadline past the 5th semester. The GSAC will make a recommendation to the Chair, who will make the final decision on whether the extension is granted.

D. Requirements for Satisfactory Annual Progress

D1. Research activity and productivity deemed satisfactory by the dissertation committee and the faculty.

D2. At least one dissertation committee meeting is required annually. In the second year, the dissertation committee meeting must occur in the fall, prior to December 1. Participation of the external (outside BioSciences) committee member is not required at this point, but this member must be added no later than the committee meeting of the student’s third year.

It is the student’s responsibility to schedule each dissertation committee meeting after coordinating with the dissertation committee. At the completion of each meeting, the Major Advisor will, in consultation with the committee members and the student, briefly summarize in writing the student’s past progress as well as recommendations and requirements for future progress. This 1-page form will be signed by the committee members and the student and will go on file with the Graduate Coordinator.

D3. Participation in Graduate Student Science Day. One day in December is set aside for short presentations by grad students to the whole department. The goals of this day are to:

a) foster awareness of research currently being conducted in the department,

b) to encourage feedback that will improve research projects and

c) to give students practice in the fundamentally important skill of presenting research via a professional-meeting style talk.

While assessment is not a specific goal of Grad Student Science Day, students should be aware that their talks may be a major route by which some faculty (e.g., those not on particular dissertation committees) learn about the progress the student is making, and therefore that the talk may play a role in the faculty discussions of annual progress. First year students may choose to talk about previous research (e.g. from a master’s thesis done elsewhere) or simply present a talk on a topic of interest and how it relates to a potential dissertation.

D4. Attendance at the departmental seminar (EBIO 585/586) is required except under exceptional circumstances. In addition, participation in afternoon and evening receptions for visiting speakers is an excellent opportunity to increase your scientific network and talk science with leading researchers.
D5. Procuring funding for research is a critically important skill for working scientists, and one that is best developed through frequent grant applications. While grant opportunities will vary among students (e.g., non-U.S. citizens have fewer options than citizens), students should make attempts to procure outside research and stipend funding annually.

D6. Completion of annual report. The annual report serves as a record of student progress towards the Ph.D. The report will be due at the Graduate Coordinator’s office by 1 December. It consists of:

- A standard academic CV (including, but not limited to, publications, presentations, and funding received)
- An overall abstract of the dissertation.
  - For students in their first two years who have not yet settled on a dissertation plan, a paragraph describing research interests and likely directions is sufficient.
  - For advanced students in or beyond their third year, abstracts of the dissertation chapters
- A 1-page summary of what has been accomplished in the past year, covering the same areas mentioned (above) in the list of goals. Include a list of all attempts to gain research or stipend funding, with an indication of status (awarded, declined, or pending).
- A 1-page plan listing professional goals for the coming year. This plan could include experiments to be run, data to be collected, manuscripts/dissertation chapters to be written, manuscripts to be submitted, meetings, presentations, funding applications, teaching, and other goals.

E. Evaluation of Annual Progress

During December, a meeting of the EEB faculty (tenured and tenure-track faculty) will take place to determine ratings for each student and priority for funding for the following semesters. The annual reports from each student and the student’s dissertation committee will be available to all faculty before and during discussion. Ratings will be based on student research activity and productivity as well as compliance with the basic requirements (sections B-D, above). It is expected that the majority of students will receive ratings of Satisfactory. Failure to meet any of the basic requirements (sections B-D, above) will result in an automatic unsatisfactory rating. In cases where the student has met the basic requirements but is deemed to be making insufficient progress, the faculty may either give an Unsatisfactory rating, or dismiss the student from the program, based on a 2/3 majority vote. In cases of unsatisfactory progress, the student will be given a timeline to meet the requirements laid out in the progress evaluation. If the requirements are not met in accordance with the timeline, the student will be dismissed from the program. Ratings of Unsatisfactory in two consecutive years will lead to automatic dismissal.

Possible ratings:
- Excellent
- Satisfactory
- Unsatisfactory
- Dismissed
F. Dissertation

F1. A PhD dissertation has a minimum of three publishable units. Students considering academia should likely aim for more than three publications from their dissertation work. It is wise to consult with the major advisor on this topic, as fields of study and labs differ. In addition, it is important to consult with the major advisor on the timing of manuscript submission. While some advisors may be fine with submission after the degree has been awarded, others may make the scheduling of a dissertation defense contingent upon submission or publication of at least some of the dissertation work.

For the format and deadlines associated with the preparation of the dissertation see the Rice University guidelines. The structure of the dissertation (number and format of chapters, etc.) will vary and will be designed in consultation with the major advisor.

F2. An oral defense of thesis is required. The student’s advisor must give approval before a student can request to defend their thesis. After approval is given, a student must talk to the graduate coordinator to reserve a room and to create an event to publically announce to Graduate Post-Doctoral Studies department at least two weeks prior to the defense date. University rules also require that a copy of the thesis be available in the department office not less than two calendar weeks prior to the date of the oral defense. The student should also send a copy of the thesis to their committee no less than two weeks prior to the date of their oral defense. The student will present a public presentation of the thesis results. The presentation will be followed by an examination of the student by the dissertation committee.

G. Research funding

Sources of funding for student research vary across labs. In some cases, the student’s research is closely allied with that of the Major Advisor and is funded via her/his grants. In other cases, students will find it necessary to obtain funding from outside sources for particular projects. Philosophies differ across advisors and it is wise to have an early and frank discussion with your advisor about these issues.

H. Petitions, Appeals, and Grievances

H1. Full details of the rules regarding petitions, appeals, and grievances can be found in the document “Guidelines for Dismissals, Petitions, Appeals, Grievances, and Problem Resolution” which represents official University policy. A copy of this document is available to all students on OWLSPACE in the “Grad Student Info” folder in Resources. This University policy document also details time limits that apply to petitions and appeals.

H2. Petitions involve exceptions to academic requirements, regulations, and decisions. Under University guidelines, petitions are to be viewed as “unusual, rather than typical.” Students should address questions about the petition process to GAC. All appeals of decisions should be made at the lowest possible administrative level above that at which the original decision was made. For example, exceptions to a course requirement would be made to GAC. An appeal of a decision made by a dissertation committee, GAC, or the EEB faculty would be to a level above the department (either the Dean of Natural Sciences or the Dean of Graduate Students depending on the nature of the decision being appealed).
I. Vacation Policy

I1. Arrangements for holidays and other time off must be made in advance in consultation with the advisor and must be in compliance with university rules and any guidelines from funding agencies.

8. Department Seminars – EBIO 585/586

Graduate students are required to register and attend the departmental seminar series, EBIO 585/586 usually scheduled on Fridays at 4:00pm in 123 Anderson Biology Labs. A reception usually follows the seminar. Ecologists and Evolutionary Biologists from outside of Rice meet with faculty and share their latest findings through a seminar presentation. During the seminar speaker’s visit graduate students can sign up through the graduate coordinator for one of the limited spots to have lunch with the seminar speaker at Rice’s Cohen House faculty club.

9. Student Seminars – EBIO 520

- Meets every Wednesday at 12:00pm in Anderson Bio Labs 211B (Lunch is provided)
- Topics of discussion range from professional development, presentation practice, web presence, CV swaps etc.
- Note: This course is not mandatory but you would miss out if you did not attend.

10. 1st Year Student Mentoring Program

Two to three first-year students are paired with two to three advanced students, usually a second-year student and a more advanced student. These mentoring groups meet for lunch several times during the first year to provide advice and support for classes, rotations, adjusting to graduate school, and life in Houston. In addition to this formal mentoring program, any student experiencing difficulties is encouraged to talk with the EEB graduate program director, the EEB graduate coordinator, the department chair, or the department assistant chair, who will endeavor to provide assistance. Additional resources are listed in Chapter 13, Student Resources.
11. Procedure for Lab Accidents

- Graduate Students classified as a Fellow, Teaching Assistant (TA) and/or Research Assistant (RA) injured in the lab at Rice University are covered under Worker’s compensation. Rice Student Health Center does not provide medical services for workers compensation care. Therefore students injured in the lab should not go to Rice Health Services. The following protocol should be used for all lab injuries.

- **Emergency**
  - **Call Rice University Police Department at 713-348-6000** (Do not call 911)
  - RUPD will dispatch officers to the scene and Rice EMS if needed
  - In case Houston Fire Department trucks or ambulances are needed, RUPD will meet them at the entrance gates and guide vehicles to the location
  - Be sure to tell the RUPD dispatcher of your location, and clearly describe the incident

- If the incident involves chemicals, biological material, or radioactive materials your supervisor or someone in the laboratory should contact Rice Environmental Health and Safety at 713-348-4444.

- When injury or illness involves a chemical, Safety Data Sheet (SDS) should accompany the victim to the hospital.

- A First Report of Injury Form must be filed with the Director of Risk Management, VP for Administration (MS-670)

- An Accident/Incident Report must be submitted to your Department head and Environmental Health and Safety. The form is available on the Environmental Safety website at [http://safety.rice.edu/](http://safety.rice.edu/)

- **Administer First Aid, if necessary**
- **Evacuate the area, if necessary.**

- **Non-Emergency**
  - Minor medical injuries/illness occurring in the workplace should be reported immediately to the injured party’s supervisor. The supervisor should fill out a First Report of Injury Form (available from Risk Management [http://riskmanagement.rice.edu/workerscomp.cfmt](http://riskmanagement.rice.edu/workerscomp.cfmt) or Environmental Health and Safety [http://safety.rice.edu/](http://safety.rice.edu/)). Submit this form to either Renee Block at rab@rice.edu or Ana Robledo at arobledo@rice.edu as soon as possible. You can also fax the report to 713-238-4285.

- If non-emergency medical attention is needed, the student should seek treatment at NOVA
- Clinic (workers compensation care) located 9563 Main Street. Contact Risk Management for an appointment. If transportation is not available, a request can be submitted to NOVA to provide transport.
12. Title IX Support

Assault, harassment, discrimination

Rice encourages any student who has experienced an incident of sexual, relationship, or other interpersonal violence, harassment or gender discrimination to seek support. There are many options available both on and off campus for all graduate students, regardless of whether the perpetrator was a fellow student, a staff or faculty member, or someone not affiliated with the university.

Students should be aware when seeking support on campus that most employees are required by Title IX to disclose all incidents of non-consensual interpersonal behaviors to Title IX professionals on campus who can act to support that student and meet their needs. The therapists at the Rice Counseling Center and the doctors at Student Health Services are confidential, meaning that Rice will not be informed about the incident if a student discloses to one of these Rice staff members. Rice prioritizes student privacy and safety, and only shares disclosed information on a need-to-know basis.

If you are in need of assistance or simply would like to talk to someone, please call Rice Wellbeing and Counseling Center, which includes Title IX Support: (713) 348-3311.

Policies, including Sexual Misconduct Policy and Student Code of Conduct, and more information regarding Title IX can be found at safe.rice.edu
13. Medical or Parental Leave

Medical leaves and other types of interruptions of study are handled according to the guidelines in the General Announcements (http://ga.rice.edu/GR_withdrawals/). If a graduate student temporarily cannot fulfill the duties of his or her appointment due to a medical emergency or the adoption or birth of a child, the student may be temporarily released from academic responsibilities as described below.

A student may apply for short-term medical or parental release at any time during the semester. The application form can be found in the Graduate and Postdoctoral Studies form library (http://graduate.rice.edu/allforms). Enrollment and stipend support may be continued for up to six weeks or until the appointment expires (whichever occurs first). Graduate and Postdoctoral Studies requests that short-term parental release requests be submitted four weeks prior to the expected start date. Students taking a voluntary short-term release should make arrangements with their advisor and instructors to complete their academic responsibilities in a timely manner.

Students receiving a short-term medical or parental release may also request a 1-semester postponement of graduate program deadlines that occur in the year following the 6-week leave. For example, upon returning to full-time research following the 6-week leave, a student may request a 1-semester delay in an upcoming research presentation, progress review meeting, and/or candidacy exam. A student may request deferral of TA responsibilities for one semester. Such requests should be made in writing via email to the graduate program director and copied to the department chair. In subsequent years, the student would be expected to meet standard program deadlines.

We strongly encourage students who are experiencing a medical issue or anticipating the birth or adoption of a child to talk with the director of graduate studies, the department chair, and/or the assistant department chair to discuss the full range of options that may be available.
14. Resources for Students

Center for Written, Oral and Visual Communication (CWOVC)
http://cwovc.rice.edu/; (713) 348-4924
Help with writing papers and dissertations, presentation skills

Center for Teaching Excellence (CTE)
http://cte.rice.edu/; (713) 348-2929
Offers Certificate in Teaching and Learning, TEACH workshops, TA training, a reading group, and various teaching, learning, and technology workshops

Campus resources for students with children
GSA resource compilation for parents (http://gsa.rice.edu/family.aspx)
H. R. Child Care Resources Page (http://people.rice.edu/Content.aspx?id=833&libID=854)

Graduate Student Association
http://gsa.rice.edu/
Hosts community-building events and represents graduate student interests to the University administration; provides small short-term loans (http://gsa.rice.edu/content.aspx?id=218) and bike rentals; housing and other tips for new graduate students (http://gsa.rice.edu/content.aspx?id=222); conference travel funding (https://gsa.rice.edu/travelgrant.aspx); resource compilation for parents (http://gsa.rice.edu/family.aspx)

Office of Graduate and Postdoctoral Studies
http://graduate.rice.edu/current-students; (713) 348-4002
Forms, registration information, time boundaries, thesis guidelines, professional development resources, short-term loans (http://graduate.rice.edu/mosleyadams)

Office of International Students and Scholars (OISS)
http://oiss.rice.edu/; (713) 348-6095
Support for international students, including visa assistance and advice for living in Houston

Rice Counseling Center
http://rcc.rice.edu/home/; (713) 348-4867
Consultation and individual and group mental health counseling for Rice students

Student Health Services
http://health.rice.edu/; (713) 348-4966
Preventive and outpatient medical care for Rice students

Student Wellbeing Office
http://wellbeing.rice.edu/SWO/; (713) 348-3311
Advice for students with wellbeing concerns, including tools for managing conflict and academic challenges

Women’s Resource Center
http://women.rice.edu/
Works to increase awareness of and sensitivity to gender issues
15. Graduate Student Awards

Ecology and Evolutionary Biology Best Thesis Award
2015: Onja Razafindratsima

Ecology and Evolutionary Biology Best Graduate Student Paper
2015: Christopher Dibble

Ecology and Evolutionary Biology Peter Savvas Nelson Award
2015: Patrick Clay

Ecology and Evolutionary Biology Outstanding Student Seminar
2015: Brad Ochocki

Ecology and Evolutionary Biology Joe Davies Prize for Outstanding Service as a Teaching Assistant
2015: Shannon Carter and Eslam Elshahat

BioSciences Service Award
2015: Kim Gonzalez, Shannon Carter
Graduate Student Committee Meeting A-1
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When Should I Reference Something A-14
New Graduate Student Checklist A-15
GRADUATE STUDENT COMMITTEE MEETING

Student Name: ______________________

Date and location of committee meeting: ______________________

Major Advisor: ______________________

Co-Advisor or: ______________________

Committee Member: ______________________

Committee Member: ______________________

Committee Member: ______________________

Committee Member: ______________________

Summary/ comments:
PETITION FOR APPROVAL OF CANDIDACY FOR A DOCTORAL DEGREE

Candidacy for the Doctoral degree cannot be approved until the applicant has completed all course requirements, all qualifying or preliminary examinations or department equivalent, and any foreign language requirements.

1. Name of applicant ____________________________  
   (Last)  (First)  (M.I.)

2. Department ____________________________  Student ID# ____________________________

3. Attach to this application a current transcript (printed from Esther).

4. Attach to this application a statement of all applicable departmental requirements for both course work and qualifying or preliminary examinations.

5. Attach student’s departmental checklist to candidacy to document how the student has fulfilled departmental requirements.

6. Proposed thesis topic (tentative title) ____________________________________________________

7. Thesis Committee, subject to the approval of the GPS. (type or print)
   (a)  Thesis Director ____________________________
        Committee Chair within the department (if different) EEB DOES NOT USE THIS LINE
   (b)  Member within the department ____________________________
   (c)  Member outside the department ____________________________
     Additional member(s) ____________________________

8. Signatures:
   ____________________________  Date ________________
   Original signature of Department Chair or  
   Director of Graduate Studies

   ____________________________  Date ________________
   Graduate Coordinator signature

   ____________________________  Date ________________
   Dean of Graduate & Postdoctoral Studies

RETURN TO DEPARTMENT COORDINATOR
BioSciences at Rice EEB program

Graduate Student Travel Form

NAME: _____________________________________________________________

Student ID#: ___________________________________________ Ext: ____________

Name of Conference or other purpose of travel:
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

Presentation type (Check one): ________ Poster ________ Oral

Title: __________________________________________________________________
____________________________________________________________________
____________________________________________________________________

Location of Conference: ___________________________________________________________________

Dates of Travel: _______________________________________________________________________

Estimated Personal Out of Pocket Expenses (not being charged to any other fund or account):

Transportation: ________ ____________________________

Shared Lodging: ________ ____________________________

Registration: ________ ____________________________

Total: ___________________________

Department Contribution up to 50% (Completed by EEB Office):

APPROVALS:

____________________________________________________________________

Faculty Advisor __________________________ Date Submitted _______________________

____________________________________________________________________

Department Chair
Graduate Student Progress Checklist

Grad Progress Checklist for December evaluations

All Students:
__Had dissertation committee meeting in past academic year (except 1st year students)
__presented Grad Science Day talk
__attended departmental Monday seminar
__completed annual report
__taken 4 Journal Clubs (EBIO 561, EBIO 562, EBIO 563, EBIO 568) before candidacy

1st year students:
__found Non EEB courses to fill gaps in education
__made progress toward selecting a thesis topic; at least one of the projects should involve the graduate student in the conceptual development of the idea
__has familiarity with the literature related to their intended thesis topic
__has some idea of who they would like to have serve on their committee
__data collection has begun OR sufficient progress to ensure that they will be able to collect potentially publishable data no later than the beginning of the fall semester of their second year
__has draft of thesis abstract
__has made attempts to obtain outside funding (e.g., NSF predoc if eligible)
__earned a B or better in EBIO 569 Core Course
__Met with GSAC
__read the EEB Handbook

2nd year students:
__collected data that is potentially publishable
__formed dissertation committee including outside member
__have a firm thesis topic and a tentative outline of what the sub-topics will be that will form the chapters of the thesis
__has made up coursework deficiencies
__has made attempts to obtain outside funding
__teaching requirements fulfilled or have plans to fulfill

3rd year students:
__collected data that will be publishable in a reputable peer-reviewed journal
__attended at least one national meeting
__passed candidacy exam
__has made attempts to obtain outside funding (e.g., NSF DDIG)
__has a firm thesis outline with clear descriptions of chapters and a plan that shows how these chapters will translate into publications

4th year students:
__all thesis chapters are completed or in progress
__presented at a national meeting
__has time table for the completion of their degree
__has made attempts to obtain outside funding

5th and 6th year students:
__are on track to produce a dissertation with at least 3 first- or sole-authored papers publishable in peer-reviewed journals
__has presented a talk at a national meeting
__has made progress lining up postdoctoral opportunities (whether in academia, agencies, private sector)
__developed plan for future, post PhD
Recognize and Avoid Plagiarism; Cite Sources

Plagiarism is the use of someone else’s ideas, results, equipment design, visuals, wording, or even sentence structure as if they were your own. You may state the information provided by others but only if you use your own words and cite the source of the information. Alternatively, you may use the words of others but only if you use quotation marks and appropriate citation. Changing a few words per sentence is not acceptable; it is plagiarism.

Plagiarism can be intentional if you knowingly:
- Copy something word for word without using quotation marks, even though you cite the source;
- Use all or part of a visual without crediting the source;
- Steal someone’s ideas and state them (written or orally) as if there were your own without crediting the source.

Or it can be accidental if:
- You don’t realize what is considered plagiarism in the United States;
- When you took notes, you didn’t put exact wording in quotation marks and now you plagiarize without realizing it;
- You mistakenly think that everything on the Internet is free use.

Why is it important to avoid plagiarism?
In the United States, plagiarism is considered academic misconduct, and you are expected to avoid plagiarism, either intentional or accidental. Plagiarized work can result in a failing course grade, expulsion, rejection of a paper submitted for publication, denial of an advanced degree, or loss of job. It is an increasingly serious matter now that the Internet has made plagiarism easier than ever before. Rice University has an Honor Code, which you must follow; journals are becoming increasingly explicit about the need to avoid plagiarism.

How can you avoid plagiarizing?
1. For each source you read, keep electronic notes. You might want to use the Template for Taking Notes, which can be downloaded from the Engineering Web site, link Thesis Writing Seminar: www.engr.rice.edu. As you enter the information, proofread for completeness and accuracy. As you take notes, put quotation marks around any wording that you copy directly from the source so that later you can put it into your own words and won’t accidentally plagiarize.

2. If you copy something word for word, put quotation marks around it and cite it: (Jones 2008). If you paraphrase by putting ideas into your own words, cite the source of the ideas: (Jones 2008). If you copy a figure or table, cite it at the end of the caption and inside the period: (Jones 2008). If you adapt a figure or table or use only part of it, cite it at the end of the caption: (Adapted from Jones 2005). Put the complete bibliographic reference for all citations in the Bibliography (or Works Cited).

3. Practice paraphrasing (putting someone else’s ideas into your own words) because it’s often difficult to do. Avoid the temptation of paraphrasing too many details. Focus on the main idea or evidence that you need to cite. Once you have determined what you need to paraphrase, reread the source and then cover it up.
Write the main idea from memory and then check to verify that you haven’t used exact wording or sentence structure. Simply changing the verb tense or substituting one adverb for another, but leaving the sentence structure essentially the same, is still considered to be plagiarism. Using the same technical terms or words widely used in your field is acceptable because there are probably no accurate substitutes.

4. If you simply cannot figure out a different way of saying it, use quotation marks to indicate that you are quoting exactly. [Because few writers in science or engineering use quotations, generally preferring paraphrases, paraphrasing is a skill you must learn. In contrast, writers in the humanities often use quotations to illustrate key points, but they also paraphrase when exact wording is not essential.]

5. Always cite your source, whether for text, visuals, or ideas. If you cannot remember the source, you can’t use the information. Put citations in as you write your first draft so that you don’t have to go back later when identifying the source may be difficult.

6. In your text, make clear what the source is. Generally, it is a good idea to identify an author by name rather than by referring to a number in your bibliography, though this practice varies somewhat by field or by journal. In any case, try not use a reference number as a part of speech. Do not, for example, write that “[10] gives more compelling evidence than [98] provides.” Think of how time consuming it is for a reader to have to keep flipping to the bibliography to see who has said what. It would be preferable to write “Johnson (10) gives more compelling evidence than Dickerson et al. (98) provide.” And then move to the evidence, clearly identifying the references as you discuss the evidence each author gives. Whether you use square brackets or parentheses depends on the field or journal. Generally [ ] are used when the citations are listed numerically rather than alphabetically in the Works Cited section of your paper.

Examples of Citation within the Text
CONFUSING: [10] and [15] were the next to apply this algorithm to new genetic sequences.
CONFUSING: The first big improvement came in the work of [10].
CLEAR: Koninsky et al. and Rebert et al. were the next to apply this algorithm to new genetic sequences (10, 15).
CLEAR: Koninsky et al. (10) and Rebert et al. (15) were the next to apply this algorithm to new genetic sequences.
CLEAR: Smith and Wesson (2001) were the next to apply this algorithm to new genetic sequences.
CLEAR: Research teams then began to apply this algorithm to new genetic sequences (Smith and Wesson 2001).
CLEAR: Research teams then began to apply this algorithm to new genetic sequences. (See, for example, Smith and Wesson 2007 and Rebert et al. 2009.)
RIGHT, but LESS CLEAR: Research teams then began to apply this algorithm to new genetic sequences. (See, e.g., 10, 15, 22, and 54.)
For suggestions on how to avoid plagiarism and cite information, see Diana Hacker’s The Bedford Handbook, 7th ed. (Revised 2009) or the 2009 8th edition. She includes extensive examples of APA and Chicago style guides. I suggest, too, that you check the Web Site for the book: www.dianahacker.com/bedhandbook for further information. Or go to other Web sources for the APA Citation Style Guide or the Chicago Manual of Style Citation Guide. Journal Style Guides also give examples.

Examples of Plagiarizing and Paraphrasing

**The original text**
“The new Internet economy has brought about the development of competing search engine companies, each with its own proprietary software. Sites are collected and updated differently. After a search is conducted, one search engine provides exactly what’s required within the first ten hits whereas another is useless. Frequently there is tremendous overlap, although no two search engines are exactly alike. Since the outcome varies from search engine to search engine, researchers often find it necessary to use several engines for the same question for either the best or more comprehensive results.”

Read the following student-written examples and decide if each is paraphrasing or plagiarism.

1. Burnett points out that competing search engine companies have proprietary software that collects and updates sites differently. As a result, one will provide what you want within the first ten hits, while another is useless. That means that researchers will frequently need to use several engines to obtain the best or more comprehensive answers (2001).

2. Multiple search engines on the Internet have arisen, each with unique strengths and weaknesses. These differences derive from each engine’s respective method of analyzing and classifying information on the Internet. As a direct result of these differences, more exhaustive search results are often obtained through the use of several engines (Burnett 2001).

3. When researching a specific subject on the Internet, the use of multiple search engines is essential for a thorough search because each search engine utilizes different algorithms.

4. Rebecca Burnett suggests that we use several search engines because sometimes there is tremendous overlap in results and the outcome differs from search engine to search engine (2001).
Analysis of the four responses

1. Even though the author’s name and date are cited, this is clearly plagiarism. Changing the verb from passive to active (“are collected and updated differently”) becomes “collects and updates differently”) is not sufficient change. Substituting “while” for “whereas” in “within the first ten hits …another is useless” again is not sufficient change. Some exact wording is retained; sentence structure is identical. The same objections hold for “to use several engines….the best or more comprehensive answers.”

Some students have tried to argue that the information in the original paragraph is now common knowledge and that, as a result, some use of the exact wording is inevitable. I agree, to a certain extent. I wouldn’t be surprised if “proprietary software” occurs to many writers as a phrase. But example #1 relies far too heavily on simple substitution while retaining sentence structure and whole blocks of words.

2. This is a fine paraphrase. The source is cited and the only duplicate wording occurs in “several engines,” a phrase that I would agree is in common use and therefore is not plagiarism.

3. This is an acceptable paraphrase, but the source is not cited. So it is plagiarism!

4. Because this is so short, you might be tempted to call it a paraphrase. But “tremendous overlap” is identical, and “the outcome differs from search engine to search engine” changes only “varies” to “differs” and leaves the rest of the wording and structure the same. It is plagiarism.

Frequently asked questions

1. When don’t I have to cite the source for information?
   You don’t have to cite basic knowledge that is found in two or more textbooks. But neither can you use it word for word—you must paraphrase. The exception would be something like a common definition, formula or algorithm; those you may use as they appear in the source.

2. What if I’m using a common method that’s difficult to reword? Do I have to cite the source?
   If you use it word for word rather than paraphrasing it, you must cite the source. I know of an Assistant Professor who was denied tenure for taking a method word for word from a published paper. If the method is widely used, consider referring the reader to a published paper for the method; then note any changes you make.

3. How do I cite a source that I read about in a different article, a review article, for example?
   You will have to cite the source as well as the review article. It’s always best to get a copy of the original article instead of relying on what someone else says about it, however. Reviewers are not equally good, and even a good reviewer may be focusing on different aspects of the article than you need. The exception would be an article originally published in a language you can’t read or an article
that is no longer available. In such cases you must make clear that it is the reviewer’s interpretation that you are citing.

4. What do I put in the Bibliography or Works Cited?
   Everything you cited and nothing that you didn’t cite.

5. What should I do if I have an important quotation or a really relevant figure, but I can’t remember where I found it?
   See if you can track it down via the Internet. If you can’t find it, you can’t use it.

6. Can I cite my own previously published paper or my thesis?
   Of course! But first read the contract you signed with the journal. Some journals give you permission in the contract to use your paper in a thesis. In other cases, you must contact the journal to get permission for use. You do not have to get permission from the other authors listed on your paper, however, because all the authors have equal copyright ownership. Each of you can cite the paper. If you were first author and are now using essentially the entire paper as a chapter in your Master’s or PhD thesis, make clear at the outset of the chapter that it comes largely from your paper (cite it clearly!). Then later in the chapter make it absolutely clear that the chapter is based on your paper. If you use any figures or tables from the published paper, cite those as well. If you are using your thesis as the basis for a paper, make that clear, too. You can cite it as an unpublished thesis or dissertation.

7. When do I have to get permission to quote or paraphrase someone else’s work?
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Travis, E. R.; Hannink, N. K.; van der Gast, C. J.; Thompson, I. P.; Rosser, S. J.; Bruce, N. C. Impact of transgenic tobacco on trinitrotoluene (TNT) contaminated soil community. Environ. Sci. Technol. 2007, 41 (16), 5854-5861; DOI 10.1021/es070507a. (As illustrated in the Style Guide for Environmental Science & Technology; note the substitution of the DOI for the URL and date retrieved when the DOI is available. The Style Guide also gives examples of how to cite different kinds of sources.)


Janice L. Hewitt, PhD. Brown School of Engineering, Rice University, 2009 jhewitt@rice.edu
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Janice L. Hewitt, PhD, Brown School of Engineering, 2009  jhewitt@rice.edu
When should I reference something?
Give a reference if
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-its some one else’s observation

Disruption of xxx blocks the yyy pathway in Arabidopsis (Smith and Jones, 2003). Because of their similarity to xxx, the abc kinases may be part of the yyy pathway (Doe, 2005). To test this, I will use homologous recombination (Jones and Smith, 2001) to disrupt abc1 and determine if this blocks the yyy pathway.

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Because of their similarity to xxx, the abc kinases may be part of the yyy pathway (Doe, personal communication).

A good rule of thumb is that each sentence in an introduction needs a reference; sometimes a sentence clearly continues the description of the work in a previously referenced sentence and then doesn’t need a reference.

How do I reference material from a review article?
Sometimes you get a review article (Epsiloni, 2008) that reads something like

The abc kinases were first discovered by Alpher (Alpher, 1982). There are 15 abc kinases (Beta, 2007). There are two types of abc kinases, type I and type II (Gamow, 2006). The type I but not the type II abc kinases are present in plants but not in animals or fungi (Delter, 2008).

If you paraphrase the above section without reading the four articles, and/or without referencing the review article, you will be in trouble. If you didn’t read the 4 original papers, you should only reference the review article:

Two types of abc kinases have been described (see Epsiloni, 2008 for review).

If you read the 4 original papers, and in your writing you follow the general outline or format of the review paper (or any other document), you need to reference the review paper or document.

A recent review Epsiloni (Epsiloni, 2008) describes how Alpher first identified abc kinases (Alpher, 1982), and that are 7 type I and 8 type II abc kinases (Gamow, 2006; Beta, 2007). ..
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