QUARTER GRADING GUIDELINES FOR SCIENCE RESERACH

Updated: April 2014

Goals of the course surround those **student-exhibited behaviors** such as: actively engaged well beyond a perfunctory level, exhibiting positive behaviors associated with problem-solving / research / task analysis / critical thinking / creative thinking, as well as, focused, questioning, being capable of answering questions regarding the work, and responsive to their mentor/facilitator and/or the process outlined in the course

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| Range | Student Behaviors / Accomplishments / Activities |
| 98-100 | * you have completed the research project or you are implementing the agreed upon methodology   The above issue is central to this score, but other necessary behaviors coupled to, being engaged in research, are:   * collecting data or analyzing data * continuation of refining/ developing an extensive literature review * you have a mentor with whom you actively work, (or have been striving to find a mentor) * articulation of the project’s elements such as, but not limited to: hypothesis, variable, control(s) etc * demonstration of your grasp of the major ideas / themes / issues / challenges of the field * integration of the field's jargon into appropriate conversations * maintaining all records throughout the year, including summer work * completing all requirements of communication with facilitator and all parts of the checklist * following the process per the guidance of mentor or course * consistently meeting deadlines (timely completion/receipt of work) * demonstrating independence in writing emails / problem solving / follow through on ideas (plans) * demonstrating the ability to solve the small issues associated with implementation * attending a conference or competition * focused work beyond the classroom, throughout the school year/summer * original work (authenticity in work) * work that has the possibility of informing others in the field (adding to the field of study) * As a sophomore you are engaged actively in your science fair project (and can demonstrate the vast number of the above competencies, as far as is reasonable given the introductory level) including an extensive literature review &/or consistent good faith efforts to move in a positive direction |
| 95 -97 | The key difference for this range (relative to the above) is that you are not yet engaged in the implementation of an agreed upon methodology. However, most of the following competencies are exhibited:   * actively working with a mentor or actively seeking a mentor based upon a significant literature review but not yet engaged in the implementation of an agreed upon methodology * demonstrating independence in writing emails / problem solving / follow through on ideas * consistently meeting deadlines (timely receipt of work) * demonstration of your grasp of the major ideas of the field * integration of the field's jargon into appropriate conversations * completing all course requirements per the checklist and those re: communication with facilitator * consistently emailing synopses of literature review pieces * engaged in a significant literature review **&/or** * ***developing*** a methodology as well as articulate an hypothesis, variable(s), control(s) &/or * seeking and acting upon the advice of ad hoc experts beyond the facilitator * following the process per guidance of a mentor, the facilitator, & the course * actively moving forward to engage in research that while, ***not thoroughly original*** in process, scope or goal, it ***has a unique twist/interpretation to extant work***, adding depth and value to the hypothesis. |
| 93 -94 | * engaged in a thorough / sophisticated / focused literature review &/or * actively seeking a mentor based upon a significant literature review * completing all course requirements per the checklist and those re: communication with facilitator * engaged in pre-project preparations: writing surveys, writing methodology (procedure), completing a who, what, where, when, why, how, how much , learning statistics * meeting all of the course requirements in terms of deadlines/work beyond the classroom etc.... |

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| 90 - 92 | * engaged in a literature review that has pieces of significant depth which inform the student as to his/her direction, generates ideas but may be seen as unremarkable in other aspects ... such as the number / quality of articles, rigor, &/or the review lacks focus, lacks directed purpose, is ever-changing. * consistently meeting deadlines * completing most course requirements per the checklist and those re: communication with facilitator * consistently emailing synopses of literature review pieces * demonstrates the ability to articulate / evaluate / what has been read * demonstrates a high level of independence when selecting direction / articles / evaluating articles * showing discrete growth in determining a final project * meeting all of the course requirements in terms of activities/ communication/ work outside of the classroom etc.... but may need reminders * a project is in disarray – due to expiration of test organisms but the student can articulate a solution to the challenge |
| 88-89 | * engaged in a literature review that has little significant depth (grounded in popular press), yet can be seen as informing the student as to his/her possible direction; generates ideas; and clarifies jargon * consistently meeting deadlines * completing most course requirements per the checklist and those re: communication with facilitator * emailing most of the necessary synopses * requiring some advice as to the next best step in terms of reading * has rare difficulty in meeting all of the course requirements in terms of deadlines/work etc.... |
| 86-87 | The evaluation includes the above to but to a lesser degree of accomplishment |
| 83-85 | * **The overall guiding principle for a “B” is that the student is working in good faith, but experiences issues in terms of quantity / quality of produced work…in essence they are struggling with their work ethic, but have vital pieces put together. Some of these issues are outlined below. This is a grade assigned in good faith, but continuation of problems may lead to lower grades further on.** * the student is engaged in a limited literature review yet has at two to three articles of significant depth * communications with the facilitator are reasonable but require improvement in depth/number/timing * participates at an acceptable level during group work * is focused on the research tasks when working at the computer * At minimum: the student can articulate a project idea, an hypothesis, variable, control …   *but at an observable level....*   * engagement may be described as: cool, somewhat undirected, truculent, inadequate to complete a project in a timely fashion * has questions, but does not seek answers out independently, when that is appropriate or when directed * relies upon the facilitator to problem solve * has failed to; meet multiple course requirements per the checklist or to use available resources * the student shows a poor mastery of jargon and/or can not articulate the basic issues of the course * the digital portfolio is thin or incomplete   an important deadline has been missed / late or failure to report 5 week progress, appropriate |
| 80-78 | * the student is working but that work is resulting in a product which is far off the scheduled time-line * the student’s level of communication on their part is inadequate * multiple portions of the checklist are unmet / or at a bare minimum * the student’s literature review is described as inadequate or is absent/lacking * the student’s work shows a lack of direction, idea, and/or a lack of growth beyond that of the last quarter * the student shows a poor mastery of jargon * the student’s portfolio is somewhat thin or incomplete * the student’s time in independent work is unproductive * Junior/Senior: there are no mentor emails developed; or limited engagement beyond the school year and/or classroom |

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| 77-65 | At least one of the following has transpired (dependent upon the degree and/or nature of issues)   * it has been suggested by the facilitator or a mentor that the student drop the course, due to a variety   of issues not limited to those listed in this document AND these issues are extant at the time of grading.   * engagement may be described as: cool, somewhat undirected, truculent, inadequate to complete a project in a timely fashion * has questions, but does not seek answers out independently, when that is appropriate or when directed * relies upon the facilitator to problem solve * has failed to; meet multiple course requirements per the checklist or to use available resources * the student has received a grade or a report comment in the past, urging them to re-double / re-focus their effort (e.g. at half-quarter), but has made little progress in their project. * the student has failed to follow through on the majority of the checklist activities * the student has struggled with the concept of independent work / shown a lack of significant forward motion on their project (especially sophomores …beyond those problems associated with the expiration of test subjects such as a plant population …etc) * the student has failed to complete assigned class activities, e.g. the checklist activities * the student has been spoken to multiple times regarding their independent time at the computers, their lack of productivity AND no resolution to these issues has been enacted by the time of grading. * a mentor or facilitator has raised questions / concerns regarding the appropriateness of the student and/or the student’s behavior / project direction * the student has a poor grasp, by midterm or later, of jargon, a poor literature review, a lack of engagement in terms of experimentation, a lack of methodology. |
| Failure | More than one of the following has transpired   * it has been suggested by the facilitator or a mentor that the student drop the course, due to a variety   of issues not limited to those listed in this document AND these issues are extant at the time of grading.   * the student has failed to follow through on the majority of the checklist activities * the student has failed to complete assigned class activities, beyond the checklist activities * the student has been spoken to multiple times regarding their independent time at the computers, their lack of productivity AND no resolution to these issues has been enacted by the time of grading. * the student has no completed symposium project, by the deadline as given by the facilitator and/or by the time the class moves onto the next phase of the course (sophomores) * the student has struggled with the concept of independent work / shown a lack of significant forward motion on their project (especially sophomores), (beyond those problems associated with the expiration of test organisms etc) * the student has received grades or report comments in the past, urging them to re-double / re-focus their effort (e.g. at 5 weeks), but has made little progress in their project. * the student has been found to be engaged in un-authorized experiments. * the student is guilty of plagiarism. * data have been falsified and/or written logs include falsified information. |