



ARIZONA STATE UNIVERSITY

GENERAL STUDIES COURSE PROPOSAL COVER FORM

Course information:

Copy and paste current course information from Class Search/Course Catalog.

College/School New College of Interdisciplinary Arts and Sciences Department SMNS

Prefix LSC Number 388 Title Research Fundamentals in the Natural Sciences Units: 4

Is this a cross-listed course? No If yes, please identify course(s)

Is this a shared course? No If so, list all academic units offering this course

Note- For courses that are crosslisted and/or shared, a letter of support from the chair/director of each department that offers the course is required for each designation requested.

Is this a permanent numbered course with topics? Yes

If yes, all topics under this permanent numbered course must be taught in a manner that meets the criteria for the approved designation(s). Chair/Director Initials LF (Required)

Course description: Teaches research skills in the natural sciences. Topics covered include the basic research techniques of the study organism and system, experimental design, literature searches, statistical analysis and preparation of scientific papers and posters.

Requested designation: Literacy and Critical Inquiry-L Mandatory Review: Yes

Note- a separate proposal is required for each designation.

Eligibility:

Permanent numbered courses must have completed the university's review and approval process. For the rules governing approval of omnibus courses, contact Phyllis.Lucie@asu.edu.

Submission deadlines dates are as follow:

For Fall 2016 Effective Date: October 1, 2015

For Spring 2017 Effective Date: March 10, 2016

Area(s) proposed course will serve:

A single course may be proposed for more than one core or awareness area. A course may satisfy a core area requirement and more than one awareness area requirements concurrently, but may not satisfy requirements in two core areas simultaneously, even if approved for those areas.

Checklists for general studies designations:

- Complete and attach the appropriate checklist
Literacy and Critical Inquiry core courses (L)
Mathematics core courses (MA)
Computer/statistics/quantitative applications core courses (CS)
Humanities, Arts and Design core courses (HU)
Social-Behavioral Sciences core courses (SB)
Natural Sciences core courses (SQ/SG)
Cultural Diversity in the United States courses (C)
Global Awareness courses (G)
Historical Awareness courses (H)

A complete proposal should include:

- Signed course proposal cover form
Criteria checklist for General Studies designation(s) being requested
Course catalog description
Sample syllabus for the course
Copy of table of contents from the textbook and list of required readings/books

It is respectfully requested that proposals are submitted electronically with all files compiled into one PDF.

Contact information:

Name Ken G. Sweat E-mail kengsweat@asu.edu Phone 602.543.6938

Department Chair/Director approval: (Required)

Chair/Director name (Typed): Dr. Lara Ferry Date: 6.2.16

Chair/Director (Signature): [Handwritten Signature]

Arizona State University Criteria Checklist for
LITERACY AND CRITICAL INQUIRY - [L]

Rationale and Objectives

Literacy is here defined broadly as communicative competence—that is, competence in written and oral discourse. **Critical inquiry** involves the gathering, interpretation, and evaluation of evidence. Any field of university study may require unique critical skills that have little to do with language in the usual sense (words), but the analysis of written and spoken evidence pervades university study and everyday life. Thus, the General Studies requirements assume that all undergraduates should develop the ability to reason critically and communicate using the medium of language.

The requirement in Literacy and Critical Inquiry presumes, first, that training in literacy and critical inquiry must be sustained beyond traditional First Year English in order to create a habitual skill in every student; and, second, that the skill levels become more advanced, as well as more secure, as the student learns challenging subject matter. Thus, two courses beyond First Year English are required in order for students to meet the *Literacy and Critical Inquiry* requirement.

Most lower-level [L] courses are devoted primarily to the further development of critical skills in reading, writing, listening, speaking, or analysis of discourse. Upper-division [L] courses generally are courses in a particular discipline into which writing and critical thinking have been fully integrated as means of learning the content and, in most cases, demonstrating that it has been learned.

Notes:

1. ENG 101, 107 or ENG 105 must be prerequisites
2. Honors theses, XXX 493 meet [L] requirements
3. The list of criteria that must be satisfied for designation as a Literacy and Critical Inquiry [L] course is presented on the following page. This list will help you determine whether the current version of your course meets all of these requirements. If you decide to apply, please attach a current syllabus, or handouts, or other documentation that will provide sufficient information for the General Studies Council to make an informed decision regarding the status of your proposal.

Revised April 2014

Proposer: Please complete the following section and attach appropriate documentation.

ASU - [L] CRITERIA

TO QUALIFY FOR [L] DESIGNATION, THE COURSE DESIGN MUST PLACE A MAJOR EMPHASIS ON COMPLETING CRITICAL DISCOURSE--AS EVIDENCED BY THE FOLLOWING CRITERIA:

YES	NO		Identify Documentation Submitted
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>CRITERION 1: At least 50 percent of the grade in the course should depend upon writing assignments (see Criterion 3). Group projects are acceptable only if each student gathers, interprets, and evaluates evidence, and prepares a summary report. <i>In-class essay exams may not be used for [L] designation.</i></p>	Syllabus
<p>1. Please describe the assignments that are considered in the computation of course grades--and indicate the proportion of the final grade that is determined by each assignment.</p>			
<p>2. Also:</p> <div style="border: 1px solid black; border-radius: 50%; padding: 20px; text-align: center; margin: 10px auto; width: 80%;"> <p>Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-1".</p> </div> <p>C-1</p>			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>CRITERION 2: The writing assignments should involve gathering, interpreting, and evaluating evidence. They should reflect critical inquiry, extending beyond opinion and/or reflection.</p>	Syllabus
<p>1. Please describe the way(s) in which this criterion is addressed in the course design.</p>			
<p>2. Also:</p> <div style="border: 1px solid black; border-radius: 50%; padding: 20px; text-align: center; margin: 10px auto; width: 80%;"> <p>Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-2".</p> </div> <p>C-2</p>			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>CRITERION 3: The syllabus should include a minimum of two writing and/or speaking assignments that are substantial in depth, quality, and quantity. Substantial writing assignments entail sustained in-depth engagement with the material. Examples include research papers, reports, articles, essays, or speeches that reflect critical inquiry and evaluation. Assignments such as brief reaction papers, opinion pieces, reflections, discussion posts, and impromptu presentations are not considered substantial writing/speaking assignments.</p>	Syllabus
<p>1. Please provide relatively detailed descriptions of two or more substantial writing or speaking tasks that are included in the course requirements</p>			
<p>2. Also:</p> <div style="border: 1px solid black; border-radius: 50%; padding: 20px; text-align: center; margin: 10px auto; width: 80%;"> <p>Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-3".</p> </div> <p>C-3</p>			

ASU - [L] CRITERIA

YES	NO		Identify Documentation Submitted
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>CRITERION 4: These substantial writing or speaking assignments should be arranged so that the students will get timely feedback from the instructor on each assignment in time to help them do better on subsequent assignments. <i>Intervention at earlier stages in the writing process is especially welcomed.</i></p>	Syllabus
<p>1. Please describe the sequence of course assignments--and the nature of the feedback the current (or most recent) course instructor provides to help students do better on subsequent assignments</p>			
<p>2. Also:</p> <div style="border: 1px solid black; border-radius: 50%; padding: 20px; text-align: center; margin: 10px auto; width: 80%;"> <p style="background-color: yellow; display: inline-block; padding: 5px;">Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-4".</p> </div> <p style="margin-top: 10px;">C-4</p>			

Course Prefix	Number	Title	General Studies Designation
LSC	388	Research Fundamentals for the Natural Sciences	L

Explain in detail which student activities correspond to the **specific** designation criteria.

Please use the following organizer to explain how the criteria are being met.

Criteria (from checksheet)	How course meets spirit (contextualize specific examples in next column)	Please provide detailed evidence of how course meets criteria (i.e., where in syllabus)
C-1	The course is centered around a student research project. The findings of the research are presented in a final paper and a research poster presented at the campus symposium.	The class emphasizes writing not just as a final paper and poster, but in several smaller in class assignments that are the parts of the paper/poster and are peer edited by students and the instructor throughout the semester.
C-2	The entire purpose of this class is to build in students the skills necessary to design, execute and report scientific research.	In the bee version of the class, students gather data about bee and flower diversity and interactions, and then use statistical software to analyze pollinator networks and test student synthesized hypotheses. In the pepper class, students manipulate the growing or processing conditions of peppers and then harvest the fruit and analyze its capsaicinoid contents by gas chromatography. Collected data is then analyzed statistically to test student synthesized hypotheses.
C-3	The final student paper and research poster are written assignments of substantial depth.	The final paper and poster will be worked on by students extensively over the semester. In class writing assignments are the different parts of the paper and poster, and so students will have multiple opportunities to revise and improve their writing based on peer and instructor feedback. Presentation of the poster at the research symposium also entails students orally communicating the substance of their work while presenting the poster.
C-4	In class writing assignments are due almost weekly, and are reviewed and returned in a timely manner.	Starting with the first writing assignment, student papers are anonymized and given to the class to review. This feedback process over the student writing is continuous throughout the semester.

SYLLABUS LSC 388: Capsaicin Content in Chili Peppers

Instructor: Dr. Ken G. Sweat

Email: KenGSweat@asu.edu

Office location: FAB North N169

Phone: 602-543-6938

Office Hours: WF 10:00 am – noon.

Lecture/Laboratory: F 1:00 – 5:00 pm. CLCC 352.

Course Description: Teaches research skills in the natural sciences. Topics covered include the basic research techniques of the study organism and system, experimental design, literature searches, statistical analysis and preparation of scientific papers and posters.

Commented [KS1]: C-2

Attendance: Attendance is essential to performing well in this course. It is the student's responsibility to obtain information from missed exercises. Tardiness to class will not be tolerated. It disrupts the lesson, and can be especially disruptive of laboratory work. If it is unavoidable, please inform the instructor in advance. Reasonable accommodations will be made in cases of religious holidays or other emergency situations. It is the student's responsibility to provide the instructor with documentation of holidays and or emergencies and a plan to cover the missed course material.

Students who miss more than two (2) laboratory periods will not pass the course.

Text Book: There are no required text books for this class. The following text is highly recommended:

Writing Papers in the Biological Sciences, 5th edition (2013), McMillan. Bedford/St. Martin's

Computers and this course: The vast majority of class materials will be posted on the course Blackboard website. Students are expected to have an ASURite ID and access the site regularly for information. Computers are available on campus in West Campus Computing Commons located in the basement of the library.

Assignments and Grading: Final grades will be based on student performance in the laboratory and a final paper and poster describing the research.

The grading scale that will be used for the course is:

97% ≤ A+	87% ≤ B+ < 90%	77% ≤ C+ < 80%	E < 60%
93% ≤ A < 97%	83% ≤ B < 87%	70% ≤ C < 77%	
90% ≤ A- < 93%	80% ≤ B- < 83%	60% ≤ D < 69%	

The following weights will be used to calculate an overall grade:

Final Poster	30%	In class writing assignments	25%
Final Paper	30%	Attendance and participation	15%

Final Poster: The class will produce a final poster to describe their research project. The poster will be presented at the ASU West research colloquium. A different research poster will be derived for each research project. Research posters will be done as a group.

Final Paper: Each student will be responsible for a final scientific article describing the research project. Papers are to be written using the structure of a scientific research paper. Citations will use the Council of Science Editor's name, year format. The paper will use Arial or Times New Roman font in 12 point, have double spaced text and 2.54 cm (1 inch) margins at top, bottom and both sides. Failure to meet format requirements may result in a penalty of 10% of the assignment per infraction.

Commented [KS2]: C-1

Commented [KS3]: C-3

In class writing assignments: During the semester several written assignments will be made. Assignments will cover the content of the final paper and poster.

Commented [KS4]: C-4

Attendance and Participation: Each student's attendance and effort in the class will be graded.

Missed Laboratory Exercises Policy

Missed laboratory sessions may NOT be made up. Students who miss a laboratory session as a result of illness (documented with a doctor's note), religious holiday, or other extenuating and

documented circumstance (as determined by the instructor of the laboratory) should consult the laboratory instructor to resolve the situation on a case by case basis.

Cell phones: Any **PERSONAL** use of a cell phone during the course is strictly prohibited. Students whose phones interrupt either may be asked to leave and receive a penalty to their final course grade of 10% or one full letter of the final grade per infraction. However, use of the internet for class materials is strongly encouraged.

Course Schedule:

(subject to change with notice – meet in CLCC 352 [lab]).

Date:	Topic:
Aug 21	Introduction to course objectives, study organism and primary literature.
Aug 28	Student Literature Review.
Sept 4	Study design.
Sept 11	Preliminary study protocol discussion.
Sept 18	Study protocol due. Laboratory methods and techniques.
Sept 25	Laboratory methods and techniques.
Oct 2	Data reduction and analysis.
Oct 9	Writing: Introduction & Methods
Oct 16	Fall Break
Oct 23	Review Introduction and Methods
Oct 30	Data Collection
Nov 6	Data Analysis
Nov 13	Writing: Results (tables and graphs)
Nov 20	Data Analysis and Interpretation
Nov 27	Writing: Discussion
Dec 4	Writing: Discussion

Course/Instructor Evaluation

The course/instructor evaluation for this course will be conducted online 7-10 days before the last official day of classes of each semester or summer session. Your response(s) to the course/instructor are anonymous and will not be returned to your instructor until after grades have been submitted. The use of a course/instructor evaluation is an important process that allows our college to (1) help faculty improve their instruction, (2) help administrators evaluate instructional quality, (3) ensure high standards of teaching, and (4) ultimately improve instruction and student learning over time. Completion of the evaluation is not required for you to pass this class and will not affect your grade, but your cooperation and participation in this process is critical. About two weeks before the class finishes, watch for an e-mail with "**NCIAS Course/Instructor Evaluation**" in the subject heading. The email will be sent to your official ASU e-mail address.

Withdrawals: The instructor will **NOT** withdraw students for any reason. Specifically, students should be aware that non-attendance will **NOT** automatically result in their being dropped from the course. Therefore, if a student does not attend class during the first week or for any extended period of time during the semester, they should not presume that they are no longer registered. **It is the student's responsibility to be aware of their registration status.**

Please note the following dates:

Session Date & Deadlines	Session C (15 Week Session) Aug 20 – Dec 4, 2015
Classes Begin	August 20, 2015
Drop/Add Deadline (w/out College approval)	August 26, 2015
Tuition & Fees 100% Refund Deadline	September 2, 2015
Labor Day Holiday Observed – University Closed	September 7, 2015
University 21 st Day	September 9, 2015
Course Withdrawal Deadline	November 4, 2015
Complete Session Withdrawal Deadline	December 4, 2015
Veteran's Day Observed – University Closed	November 11, 2013
Thanksgiving Observed – University Closed	November 26 – 27, 2015
Deadline to Apply for Graduation	October 1, 2015
Classes End/Last Day to Process transactions	December 4, 2015
Final Exams	Dec 7 -12, 2015
Final Grades Due	Dec 7 – 14, 2015
Degree Conferral Date	December 14, 2015

Any withdrawal transaction must be completed by the deadline date in accordance to the appropriate session at the registrar's office. If not, you will still be officially enrolled and you will receive a grade based on your work completed.

*As part of a complete session withdrawal a student must withdraw from all classes in a session. Beginning the first day of classes, undergraduate students are required to work with a Student Retention Coordinator to facilitate the withdrawal process. Please refer to <http://students.asu.edu/StudentRetention>

For additional information about ASU's withdrawal policy and the possible consequences of withdrawing from a class, contact Registration Services or your academic counselor.

Students are responsible for their registration status!

The Grade of Incomplete: A grade of incomplete will be awarded only in the event that a documented emergency or illness prevents a student who is doing acceptable work from completing a small percentage of the course requirements at the end of the semester. The guidelines in the current general ASU catalog regarding a grade of incomplete will be strictly followed. **A grade of incomplete will NOT be awarded unless there is documented evidence of extreme personal or immediate family hardship.** Changes in work hours, child-care emergencies, or other similar personal problems will not be approved as reasons for awarding incompletes. The Director of the School of Mathematical and Natural Sciences must approve all incomplete grade requests.

Reasonable Accommodations for Students with Disabilities: The Disability Resource Center (DRC) provides information and services to students with any documented disability who are attending ASU West. Individualized program strategies and recommendations are available for each student as well as current information regarding community resources. Students also may have

access to specialized equipment and supportive services and should contact the instructor for accommodations that are necessary for course completion.

Academic Integrity and Code of Conduct:

As defined in the *ASU Student Academic Integrity Policy*: <http://provost.asu.edu/academicintegrity> each student has an obligation to act with honesty and integrity, and to respect the rights of others in carrying out all academic assignments. A student may be found to have violated this obligation and to have engaged in academic dishonesty if during or in connection with any academic evaluation, he or she:

- Engages in any form of academic deceit;
- Refers to materials or sources or employs devices (e.g., audio recorders, crib sheets, calculators, solution manuals, or commercial research services) not authorized by the instructor for use during the academic evaluation;
- Possesses, buys, sells, obtains, or uses, without appropriate authorization, a copy of any materials intended to be used for academic evaluation in advance of its administration;
- Acts as a substitute for another person in any academic evaluation;
- Uses a substitute in any academic evaluation;
- Depends on the aid of others to the extent that the work is not representative of the student's abilities, knowing or having good reason to believe that this aid is not authorized by the instructor;
- Provides inappropriate aid to another person, knowing or having good reason to believe the aid is not authorized by the instructor;
- Engages in plagiarism;
- Permits his or her work to be submitted by another person without the instructor's authorization; or
- Attempts to influence or change any academic evaluation or record for reasons having no relevance to class achievement.

LSC 388: Capsaicin Content in Chili Peppers follows the ASU Academic Integrity Policy in the administration of all course examinations and assignments. Violations of the University Academic Integrity policy will not be ignored. Penalties include reduced or no credit for submitted work, a failing grade in the class, a note on your official transcript that shows you were punished for cheating, suspension, expulsion and revocation of already awarded degrees. The university requires that the implementation of any of these penalties for violations of the academic integrity policy be reported to the Dean's office. The Integrity Policy defines the process to be used if the student wishes to appeal this action.

In LSC 388: Capsaicin Content in Chili Peppers you are expected to follow the *ASU Student Code of Conduct* (<http://students.asu.edu/srr/code>) especially when communicating with your peers, instructors, and teaching assistants. Violations of the student code of conduct may result in withdrawal from the class.

Final Exam Make-up Policy: The final exam schedule listed in the Schedule of Classes will be strictly followed. Exceptions to the schedule and requests for make-up examinations can be granted only by the director of the School of Mathematical and Natural Sciences for one of the following reasons:

- 1) religious observances
- 2) the student has more than three exams scheduled on the same day
- 3) two finals are scheduled to occur at the same time

Make-up exams will **NOT** be given for reasons of non refundable airline tickets, vacation plans, work schedules, weddings, family reunions, or other such activities. Students should consult the final exam schedule before making end-of-semester travel plans.

If there is a last-minute personal or medical emergency, the student may receive a grade of Incomplete and make up the final within one calendar month. The student must provide written documentation and be passing the class at the time to receive an Incomplete. A signed "Request for Grade of Incomplete" must be submitted by the student and approved by the student's instructor and the Director of the School of Mathematical and Natural Sciences.

The instructor reserves the right to make changes to this syllabus as needed.

If you find it necessary to leave a note for this instructor, please contact the administrative reception desk of the School of Mathematical and Natural Sciences located at FAB North Level 1 room N101-1.

Policy against Threatening Behavior:

In the classroom and out students are required to conduct themselves in a manner that promotes an environment that is safe and conducive to learning and conducting other university-related business. All incidents and allegations of violent or threatening conduct by an ASU student will be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students. Such incidents will be dealt with in accordance with the policies and procedures described in Section 104-02 of the Student Services Manual (<http://www.asu.edu/aad/manuals/ssm/ssm104-02.html>).

Potentially Offensive Content:

If you find any of the content of his class offensive, please bring your concerns to the instructor immediately.

Power Outage:

In the event of a campus power outage or other event affecting the ability of the University to deliver classes, any decision to cancel classes will be announced using the ASU emergency notification system. For this reason, it is imperative that students register with the ASU emergency notification system at: <https://cfo.asu.edu/emergency-alert>. In cases in which a limited number of buildings are affected, students should check the university website and/or call the School office at (602) 543-6050.

Emergency Evacuation Plan:

Students should be aware of the evacuation route posted on the exit door of each classroom. Students who cannot walk down stairs should notify the instructor as early in the course as possible so the instructor can provide information regarding the location of the designated meeting area on each upper floor of the building (marked with a blue sign that states Emergency Evacuation Response Area).



**BEE ECOLOGY IN URBAN AND WILD HABITATS (LSC 388)
SYLLABUS SPRING 2016**

Instructor: Dr. Foltz

Email: jennifer.foltz@asu.edu

Office Location: FAB N169

Office Hours: Tues, Wed, Thurs 12:00 pm – 2:00 pm

Lecture/Laboratory: Thurs. 2:30 PM – 6:30 PM CLCC 352

Course Description: The research project in this course will involve the collection of native bees using aerial netting and passive bee bowls on the University grounds and nearby Piastewa Peak. Student responsibilities will include experimental design, bee sampling, insect curation, specimen identification, and data management. Students will learn how to use a taxonomic key, construct sampling transects, curate a bee collection, and enter and perform basic statistical computations.

Attendance: Attendance is essential to performing well in this course. It is the student's responsibility to obtain information from a missed class. If an absence is unavoidable due to an emergency situation, please inform the instructor as soon as possible. Reasonable accommodations will be made in cases of religious holidays or other emergency situations. It is the student's responsibility to provide the instructor with documentation of holidays and other emergencies and a plan to cover the missed course material.

Students who miss more than two (2) laboratory periods will not pass the course.

Course Materials:

Papers will be assigned to be read throughout the semester.

Computers and this course: Much of the class materials will be posted on the course Blackboard website. Students are expected to access the site regularly for information. Computers are available on campus in West Campus Computing Commons located in the basement of the library.

Assignments and Grading: Final grades will be based on student performance and participation in the laboratory and a final paper and poster describing the research.

The grading scale that will be used for the course is:

$98 \leq A+$	$88 \leq B+ < 90\%$	$78 \leq C+ < 80\%$	$E < 60\%$
$92 \leq A < 98\%$	$82 \leq B < 88\%$	$70 \leq C < 78\%$	
$90 \leq A- < 92\%$	$80 \leq B- < 82\%$	$60 \leq D < 70\%$	



The following weights will be used to calculate an overall grade:

Research Project Proposal	15%
Paper Rough Draft	15%
Participation	15%
Poster	15%
Final Paper	40%

Commented [KS1]: C-1, C-3

Research Project Proposal: In groups of 4-5 students you will develop a research project to conduct and analyze during the semester. Your project will focus on some aspect of bee ecology/pollination and will involve the collection of field data. Your proposal must consist of an introduction containing relevant references, a hypothesis and prediction, and a sampling protocol.

Paper Rough Draft: You will be responsible for writing an individual research paper on your group research project. This will be written in the style of publishable quality scientific papers. It will contain an Introduction, Materials and Methods, Results (with your data), and a Discussion. Details on the requirements for this paper will be provided.

Final Paper: Each student will be responsible for a final scientific paper describing their group's research project. Papers are to be written using the structure of a scientific research paper. Citations will use the Council of Science Editor's name, year format. The paper will use Arial or Times New Roman font in 12 point, have double spaced text and 2.54cm (1 inch) margins at top, bottom and both sides. Failure to meet format requirements may result in a penalty of 10% of the assignment per infraction. Further details will be provided.

Final Poster: Each group will produce a research poster describing their project. This is to be produced as a group project. A research poster is a summary of your research and your paper. Further details on format and requirements will be provided.

Commented [KS2]: C-2, C-3

Attendance and Participation: Each student's attendance and effort in the class will be graded. Students are responsible for conducting field research, participating in class discussions, and curating insects.

Cell phones: Any PERSONAL use of cell phone during the course is strictly prohibited. Students whose phones interrupt either may be asked to leave and receive a penalty to their final course grade of 10% or one full letter of the final grade per infraction. However, use of the internet for class materials is strongly encouraged.

Course/Instructor Evaluation

The course/instructor evaluation for this course will be conducted online 7-10 days before the last official day of classes of each semester or summer session. Your response(s) to the course/instructor are anonymous and will not be returned to your instructor until after grades have been submitted. The use of a course/instructor evaluation is an important process that allows our college to (1) help faculty improve their instruction, (2) help administrators evaluate instructional quality, (3) ensure high standards of teaching, and (4) ultimately improve instruction and student learning over time. Completion of the evaluation is not required for you to pass this class and will not affect your grade, but your cooperation and participation in this process is critical. About two weeks before the class finishes, watch for an e-mail with "NCIAS Course/Instructor Evaluation" in the subject heading. The email will be sent to your official ASU e-mail address.

Withdrawals: The instructor will NOT withdraw students for any reason. Specifically, students should be aware that non-attendance will NOT automatically result in their being dropped from the course. Therefore, if a student does not attend class during the first week or for any extended period of time during the semester, they should not presume that they are no longer registered. It is the student's responsibility to be aware of their registration status.

Please note the following dates:



Session Date & Deadlines	Session A (7 Week Session) January 11-March 1, 2016	Session B (7.5 Week Session) March 14-April 29, 2016	Session C (15 Week Session) January 11-April 29, 2016 (Final Exams May 2-7, 2016)
Classes Begin	January 11, 2016	March 14, 2016	January 11, 2016
Drop/Add Deadline (w/out College approval)	January 12, 2016	March 15, 2016	January 17, 2016
Tuition & Fees 100% Refund Deadline	January 17, 2016	March 20, 2016	January 24, 2016
Martin Luther King Jr. Holiday Observed – University Closed	January 18, 2016		
University 21 st Day	February 1, 2016	April 4, 2016	February 1, 2016
Academic Status Report #1 – Students can view ASRs in MyASU within 24 hours after the last reporting day	January 21-25, 2016	March 24-28, 2016	February 8-15, 2016
Academic Status Report #2 - Students can view ASRs in MyASU within 24 hours after the last reporting day	N/A	N/A	March 22-29, 2016
Course Withdrawal Deadline	January 29, 2016	April 1, 2016	April 3, 2016
Complete Session Withdrawal Deadline	March 1, 2016	April 29, 2016	April 29, 2016
Spring Break – Classes Excused	March 6-13, 2016		
Deadline to Apply for Graduation	February 15, 2016		
Classes End/Last Day to Process transactions	March 1, 2016	April 29, 2016	April 29, 2016
Final Exams	Last day of classes	Last day of classes	May 2-7, 2016
Final Grades Due	March 4, 2016	May 2-9, 2016	May 2-9, 2016
Commencement (Graduate and Undergraduate)	May 9, 2016		
Degree Conferral Date	May, 9, 2016		

Any withdrawal transaction must be completed by the deadline date in accordance to the appropriate session at the registrar's office. If not, you will still be officially enrolled and you will receive a grade based on your work completed.

*As part of a complete session withdrawal a student must withdraw from all classes in a session. Beginning the first day of classes, undergraduate students are required to work with a Student Retention Coordinator to facilitate the withdrawal process. Please refer to <http://students.asu.edu/StudentRetention>

For additional information about ASU's withdrawal policy and the possible consequences of withdrawing from a class, contact Registration Services or your academic counselor.

Students are responsible for their registration status!



The Grade of Incomplete: A grade of incomplete will be awarded only in the event that a documented emergency or illness prevents a student who is doing acceptable work from completing a small percentage of the course requirements at the end of the semester. The guidelines in the current general ASU catalog regarding a grade of incomplete will be strictly followed. **A grade of incomplete will NOT be awarded unless there is documented evidence of extreme personal or immediate family hardship.** Changes in work hours, child-care emergencies, or other similar personal problems will not be approved as reasons for awarding incompletes. The Director of the School of Mathematical and Natural Sciences must approve all incomplete grade requests.

Reasonable Accommodations for Students with Disabilities: The Disability Resource Center (DRC) provides information and services to students with any documented disability who are attending ASU. Individualized program strategies and recommendations are available for each student as well as current information regarding community resources. Students also may have access to specialized equipment and supportive services and should contact the instructor for accommodations that are necessary for course completion.

Academic Integrity and Code of Conduct:

As defined in the *ASU Student Academic Integrity Policy*: <http://provost.asu.edu/academicintegrity>.

Each student has an obligation to act with honesty and integrity, and to respect the rights of others in carrying out all academic assignments. A student may be found to have violated this obligation and to have engaged in academic dishonesty if during or in connection with any academic evaluation, he or she:

- Engages in any form of academic deceit;
- Refers to materials or sources or employs devices (e.g., audio recorders, crib sheets, calculators, solution manuals, or commercial research services) not authorized by the instructor for use during the academic evaluation;
- Possesses, buys, sells, obtains, or uses, without appropriate authorization, a copy of any materials intended to be used for academic evaluation in advance of its administration;
- Acts as a substitute for another person in any academic evaluation;
- Uses a substitute in any academic evaluation;
- Depends on the aid of others to the extent that the work is not representative of the student's abilities, knowing or having good reason to believe that this aid is not authorized by the instructor;
- Provides inappropriate aid to another person, knowing or having good reason to believe the aid is not authorized by the instructor;
- Engages in plagiarism;
- Permits his or her work to be submitted by another person without the instructor's authorization; or
- Attempts to influence or change any academic evaluation or record for reasons having no relevance to class achievement.

LSC 388 follows the ASU Academic Integrity Policy in the administration of all course examinations and assignments. Violations of the University Academic Integrity policy will not be ignored. Penalties include reduced or no credit for submitted work, a failing grade in the class, a note on your official transcript that shows you were punished for cheating, suspension, expulsion and revocation of already awarded degrees. The university requires that the implementation of any of these penalties for violations of the academic integrity policy be reported to the Dean's office. The Integrity Policy defines the process to be used if the student wishes to appeal this action.

In LSC 388 you are expected to follow the *ASU Student Code of Conduct* (<http://students.asu.edu/srr/code>) especially when communicating with your peers, instructors, and teaching assistants. Violations of the student code of conduct may result in withdrawal from the class.

Final Exam Make-up Policy: The final exam schedule listed in the Schedule of Classes will be strictly followed. Exceptions to the schedule and requests for make-up examinations can be granted only by the director of the School of Mathematical and Natural Sciences for one of the following reasons:

- 1) religious observances
- 2) the student has more than three exams scheduled on the same day
- 3) two finals are scheduled to occur at the same time



Make-up exams will **NOT** be given for reasons of non refundable airline tickets, vacation plans, work schedules, weddings, family reunions, or other such activities. Students should consult the final exam schedule before making end-of-semester travel plans.

If there is a last-minute personal or medical emergency, the student may receive a grade of Incomplete and make-up the final within one calendar month. The student must provide written documentation and be passing the class at the time to receive an Incomplete. A signed "Request for Grade of Incomplete" must be submitted by the student and approved by the student's instructor and the Director of the School of Mathematical and Natural Sciences.

The instructor reserves the right to make changes to this syllabus as needed.

If you find it necessary to leave a note for this instructor, please contact the administrative reception desk of the School of Mathematical and Natural Sciences located at FAB North Level 1 room N101-1.

Title IX:

Is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at <https://sexualviolenceprevention.asu.edu/faqs>

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, <https://eoss.asu.edu/counseling>, is available if you wish discuss any concerns confidentially and privately.

Policy against Threatening Behavior:

In the classroom and out students are required to conduct themselves in a manner that promotes an environment that is safe and conducive to learning and conducting other university-related business. All incidents and allegations of violent or threatening conduct by an ASU student will be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students. Such incidents will be dealt with in accordance with the policies and procedures described in Section 104-02 of the Student Services Manual (<http://www.asu.edu/aad/manuals/ssm/ssm104-02.html>).

Potentially Offensive Content:

A notification such as the following should be included in the syllabus if appropriate for the class in question.

If you find any of the content of his class offensive, please bring your concerns to the instructor immediately.

Power Outage:

In the event of a campus power outage or other event affecting the ability of the University to deliver classes, any decision to cancel classes will be announced using the ASU emergency notification system. For this reason, it is imperative that students register with the ASU emergency notification system at: <https://cfo.asu.edu/emergency-alert>. In cases in which a limited number of buildings are affected, students should check the university website and/or call the School office at (602) 543-6050.

Emergency Evacuation Plan:

Students should be aware of the evacuation route posted on the exit door of each classroom. Students who cannot walk down stairs should notify the instructor as early in the course as possible so the instructor can provide information regarding the location of the designated meeting area on each upper floor of the building (marked with a blue sign that states Emergency Evacuation Response Area).



Lecture/Lab Schedule Spring 2016

Date	Topic
Jan 14	Introduction to course; Introduction to Bee Ecology
Jan 21	How to conduct a literature review.
Jan 28	How to develop a research project
Feb 4	Present group research projects and discussion (Group Research Project Proposal due)
Feb 11	Writing a scientific paper: The Introduction
Feb 18	Writing a scientific paper: The Methods Field techniques and visit to ASU sites
Feb 25	Field trip to Piestewa Peak sites
Mar 3	Review Introduction and Methods Start collections
Mar 10	Spring Break
Mar 17	Curation
Mar 24	Curation
Mar 31	Curation; Writing a scientific paper: Results (data analysis)
April 7	Curation : Writing a scientific paper: Discussion
April 14	Review Results and Discussion (rough draft of paper due)
April 21	How to design a poster
April 28	Poster Presentation to class (Final paper due May 1st)

Commented [KS3]: C-4

Core readings for the pepper class, LSC 388:

Arrowsmith S, Egan TP, Meekins F, Powers D, Metcalfe M. 2012. Research article: Effects of salt stress on capsaicin content, growth, and fluorescence in a jalapeño cultivar of *Capsicum annuum* (Solanaceae). *Bios* 83(1):1-7.

Kirschbaum-Titze P, Mueller-Seitz E, Petz M. 2002. Pungency in paprika (*capsicum annuum*). 2. heterogeneity of capsaicinoid content in individual fruits from one plant. *Journal of Agricultural and Food Chemistry* 50:1264-6.

Mueller-Seitz E, Hiepler C, Petz M. 2008. Chili pepper fruits: Content and pattern of capsaicinoids in single fruits of different ages. *Journal of Agricultural and Food Chemistry* 56:12114-21.

Scoville WL. 1912. Note on capsicums. *The Journal of the American Pharmaceutical Association* 1:453.

Todd Jr. PH, Bensinger MG, Biftu T. 1977. Determination of pungency due to capsaicin by gas-liquid chromatography. *Journal of Food Science* 42(3):660,665 & 680.

Yaldiz G, Ozguven M, Sekeroglu N. 2010. Varying in capsaicin contents of different capsaicin species and lines by varying drying parameters. *Industrial Crops and Products* 32:434-8.

Zewdie Y and Bosland PW. 2000. Evaluation of genotype, environment, and genotype-by-environment interaction for capsaicinoids in *Capsicum annuum* L. *Euphytica* 111:185-90.

LSC 388 Reading List Bee course

1. Bee Basics: An Introduction to Our Native Bees
2. (Cariveau and Winfree 2015)
3. (Goulson et al. 2015)
4. (Harrison and Winfree 2015)
5. (Hernandez et al. 2009)

http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5306468.pdf

Cariveau DP, Winfree R. 2015. Causes of variation in wild bee responses to anthropogenic drivers. *Curr. Opin. Insect Sci.* 10:104–109.

Goulson D, Nicholls E, Botías C, Rotheray EL. 2015. Bee declines driven by combined stress from parasites, pesticides, and lack of flowers. *ScienceExpress*:1–16.

Harrison T, Winfree R. 2015. Urban drivers of plant-pollinator interactions. *Funct. Ecol.* 29:879–888.

Hernandez JL, Frankie GW, Thorp RW. 2009. Ecology of Urban Bees: A Review of Current Knowledge and Directions for Future Study. *Cities Environ.* 2:360–376.