[Quick Links](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset" \o "Open Quick Links)

[Logout](https://lewisuniversity.blackboard.com/webapps/login/?action=logout)

[[](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset#global-nav-flyout)Janis Corona**11**[Expand Global Nav](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset)](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset#global-nav-flyout)

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| [Lewis University Home Page](http://www.lewisu.edu/)   |  |  | | --- | --- | | [**My Lewis University**](https://lewisuniversity.blackboard.com/webapps/portal/execute/tabs/tabAction?tab_tab_group_id=_574_1) | [Students](https://lewisuniversity.blackboard.com/webapps/portal/execute/tabs/tabAction?tab_tab_group_id=_541_1) | |

1. [**SU19-BIOL-59000-001 Data Science Project:Life Sci**](https://lewisuniversity.blackboard.com/webapps/blackboard/execute/courseMain?course_id=_173626_1)

**[Course-to-Course Navigation](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset#contextMenu)**

1. Week 1

[Hide Course Menu](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset)

* [Refresh](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset)
* [Display Course Menu in a Window](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset)

[**SU19-BIOL-59000-001 (Data Science Project:Life Sci)**](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset)

* [Announcements](https://lewisuniversity.blackboard.com/webapps/blackboard/content/launchLink.jsp?course_id=_173626_1&tool_id=_132_1&tool_type=TOOL&mode=view&mode=reset)
* [Start Here](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582972_1&mode=reset)
* [Syllabus](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582973_1&mode=reset)
* [Week 1](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset)
* [Week 2](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582975_1&mode=reset)
* [Week 3](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582976_1&mode=reset)
* [Week 4](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582977_1&mode=reset)
* [Week 5](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582978_1&mode=reset)
* [Week 6](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582979_1&mode=reset)
* [Week 7](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582980_1&mode=reset)
* [Week 8](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582981_1&mode=reset)
* [Discussions](https://lewisuniversity.blackboard.com/webapps/blackboard/content/launchLink.jsp?course_id=_173626_1&tool_id=_137_1&tool_type=TOOL&mode=view&mode=reset)
* [Question Lounge](https://lewisuniversity.blackboard.com/webapps/blackboard/content/launchLink.jsp?course_id=_173626_1&toc_id=_1781257_1&mode=view&mode=reset)
* [Student Lounge](https://lewisuniversity.blackboard.com/webapps/blackboard/content/launchLink.jsp?course_id=_173626_1&toc_id=_1781258_1&mode=view&mode=reset)
* [Contact Your Instructor](https://lewisuniversity.blackboard.com/webapps/blackboard/content/launchLink.jsp?course_id=_173626_1&tool_id=_180_1&tool_type=TOOL&mode=view&mode=reset)
* [Contact Your Advisor](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582982_1&mode=reset)
* [My Grades](https://lewisuniversity.blackboard.com/webapps/blackboard/content/launchLink.jsp?course_id=_173626_1&tool_id=_195_1&tool_type=TOOL&mode=view&mode=reset)
* [Blackboard Help](http://cs.lewisu.edu/cats/bb-student.php)
* [Student Help](https://docs.google.com/document/d/1apPN5avRsTZ4TL7EL_wEczs8vFd_uyrwts-dfIgkOgg/edit)

Week 1

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**Week 1 - Declaration of Research Project**

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***NOTE:*** *If you have not already done so, please review the****(Syllabus)****prior to beginning this Week.*

**Lesson Introduction**

During BIOL 51200, you developed a research proposal and prospectus for your capstone project. For this individual research project, you will need to identify a topic that applies data analytics in the context of bioinformatics or computational biology. Through your research, you will need to make a scholarly contribution to existing knowledge and practice in the field, and ultimately present it for review by the Biology and Computer and Mathematical Science Departments. Your research must be delivered via a formal, written document as well as in an oral presentation.

This capstone project must be Data Science related, and incorporate a problem related to Biology. To complete your work, you should draw upon concepts and skills learned in all other courses in the MSDS program, although you may focus on one or two areas more than others. Projects may:

* + Focus on analyzing a large-scale, real-world data set.
  + Develop a software tool for Data Science related work.
  + Implement machine learning or other Data Science-related techniques in real-time systems.

Although an initial draft proposal and prospectus was completed in the previous course, subsequent reflection upon your work and/or additional research may warrant revisions or modification of the scope of your research project. Therefore, this week in the course you will need to provide a revised proposal and prospectus, as well as indicate the source of data that will be incorporated into the research project.

**Lesson Objectives:**At the end of this lesson students will be able to:

* + Refine the topic and scope of their research project.
  + Support their research project with appropriate primary and secondary literature.
  + Identify appropriate data to be used as basis for research project.

**Reading(s) and Media**

Readings:

* + [Format Guide for Proposal Prospectus and Annotated Bibliography](https://lewisuniversity.blackboard.com/bbcswebdav/pid-3583025-dt-content-rid-33129176_1/xid-33129176_1) [Click for more options](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset#contextMenu)
  + [Format Guide for Final Written Report](https://lewisuniversity.blackboard.com/bbcswebdav/pid-3583025-dt-content-rid-33129177_1/xid-33129177_1) [Click for more options](https://lewisuniversity.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_173626_1&content_id=_3582974_1&mode=reset#contextMenu)

Media:

* + [Research Guide](http://lewisu.libguides.com/bioinformatics) on Library Website
  + [Lewis University Writing Center](https://lewisuwritingcenter.wordpress.com/)
  + [Open Collaborate Session Room](https://us.bbcollab.com/guest/353dbf0d11c14b3cbfbed821203bef45) - For student use to discuss progress with peers
  + ["Office Hour"](https://us.bbcollab.com/guest/a6f713128a19494699f54ab52cd666c1)[Collaborate Session Room](https://us.bbcollab.com/guest/a6f713128a19494699f54ab52cd666c1) - For meeting with Instructor on Wednesdays 3-4pm

**Week 1 Turnitin Written Assignment - Revised Proposal, Prospectus and Annotated Bibliography**

This document should contain three major components: a revised proposal, an updated prospectus, and an annotated bibliography including information about data that will be used in the course of this project. The proposal portion should be an extension of the proposal developed in BIOL 51200, taking into account feedback provided by the instructor of that course, as well as personal reflection upon the scope of the project as research has continued. The proposal should make clear the problem being addressed (and adequate background to justify the need for this project) as well as methodology that will be used. This portion should be 3-5 pages. Following the proposal, the intended flow of the written paper that will report this project should be provided in the prospectus (detailed outline). An example of a general outline is provided in the provided format guide. Lastly, provide an annotated bibliography reporting 10-15 resources that support your project. Although the majority of these resources should be primary research articles, you may also supplement with secondary review articles and other appropriate sources necessary for completion of your project. The prospectus must include information about data source(s) that will be used as part of this project.

Assignment Requirements:

* + This assignment is due Week 1 Sunday, 11:59pm.
  + APA formatting is required for in text citations and reporting of references
  + Assignment file must have a .doc or .docx extension
  + Submission of this work through the Turnitin analysis software will check your writing for originality. All information derived from other sources must be paraphrased and appropriately cited. Plagiarism will not be tolerated.
  + Points for this assignment = 15 (See the Grading Rubric listed in Syllabus.)
* Turnitin Assignment

**Week 1 Turnitin Written Assignment - Revised Proposal, Prospectus and Annotated Bibliography**

Please submit Revised Proposal, Prospectus and Annotated Bibliography here.   
>>  [View/Complete](https://lewisuniversity.blackboard.com/webapps/turn-plgnhndl-bb_bb60/links/submit.jsp?course_id=_173626_1&content_id=_3583027_1&tii_assign_id=79531828&orig_id=_3583027_1)

[**Week 1 Course Project - Determination of a Faculty Reviewer from Computer and Mathematical Sciences Department**](https://lewisuniversity.blackboard.com/webapps/assignment/uploadAssignment?content_id=_3583028_1&course_id=_173626_1&group_id=&mode=view)

*Please click on the link above to submit this week's assignment.*

Your capstone project should represent concepts and skills acquired across all coursework completed during the Data Science program. Ultimately, this work must be presented for review by the Biology and Computer and Mathematical Sciences Departments. As you have begun work on this project, you may have already discussed your work with faculty from both departments; now is the time to formally determine one faculty member from each department that will evaluate your completed work at the end of this course. The instructor of this class will serve as the representative from the Biology Department. It is up to you to select and arrange for a member from the Computer and Mathematical Sciences Department to serve as your additional mentor, and ultimately, reviewer of your project.

During this week, you need to initiate contact with your selected faculty member, and request that they serve as a reviewer of your project. In addition to asking their willingness to serve in this role, inquire as to whether they will be available to observe your oral presentation during Week 7 of this course (exact date and time TBD on a case by case basis). Confirmation of the faculty member’s agreement to participate as a reviewer of your oral presentation must be documented by Week 3 of the course.

Assignment Requirements:

* + Send an email to the faculty member, requesting they serve as a formal reviewer of the completed project (give a brief synopsis of your proposed project). Make sure to CC the course instructor on this email.
  + Save a copy of the inquiry email and upload to this assignment.
  + This assignment is due Week 1 Sunday, 11:59pm.
  + Assignment file must have a .pdf extension
  + Points for this assignment = 5 (Graded based on successful submission of documentation.)

**Need Help?**

**Personal Support Center, call toll-free, 24/7: 1-866-967-7048**[lewis@personalsupportcenter.com](mailto:lewis@personalsupportcenter.com)

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<https://lewisuwritingcenter.wordpress.com/>

<https://us.bbcollab.com/guest/353dbf0d11c14b3cbfbed821203bef45>

<https://us.bbcollab.com/guest/a6f713128a19494699f54ab52cd666c1>