

Werner (2008)

BorgQueen (2009)

**Course** BIOL 450 Mycology (5 credits)

**Meeting Details** As indicated in the NWIC online class schedule

**Instructor Information**

***Instructor:*** Brian D. Compton, Ph.D.

***Office Location:*** Kwina Office/Classroom Complex #110 (in Building 15)

***Office Hours:*** As posted and by appointment

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# **Disclaimer**

This syllabus is tentative and subject to change by the instructor in response to class discussion, student interest, or other variables.

# **Philosophy Statement**

The Northwest Indian College (NWIC) teaching and learning philosophy is based on the understanding that NWIC provides education that is:

1. Place-based within a learning environment that intentionally focuses on cultural context and integrated cultural experiences;
2. Informed by the highest expectations that students be self-motivated, disciplined, and willing learners;
3. Committed to the development of the skills of our students to address issues of social justice and support the vision of their communities;
4. Intergenerational with a specific focus on the development of young leadership; and
5. Holistic in support of students’ understanding of who they are and their sense of place.

("Philosophy of Teaching," 2011)

# **Purpose Statement**

This syllabus will be your guide to this academic course of instruction. It is intended to …

1. Set the tone for the course.
2. Communicate what, when, and how students will learn.
3. Make clear to students what they need to do to be successful.
4. Communicate expectations in terms of student responsibilities.
5. Deter misunderstandings about course policies.

("Writing a Syllabus," n.d.)

# **Course Description**

Overview of mycology and the relationship of fungi to environmental and human affairs with primary emphasis on Indigenous Peoples and the Pacific Northwest. Topics include cultural significance of fungi among Indigenous Peoples; biology, diversity, nomenclature and taxonomy of fungi; ecological significance of fungi; and collection and identification of local funga.

## *Prerequisites*

ENGL 102 English Composition II and ENVS 201 Northwest Plants.

## *Course Fee*

This course may include a fee for laboratory materials.

# **Course Outcomes**

As the result of this course students will be able to …

1. Describe in biological terms the primary characteristics of fungi and associated organisms, which reflect their unique attributes and relationships to each other and to non-fungal organisms.
2. Indicate how local fungi may be identified based on their biological and ecological characteristics.
3. Collect and identify local fungi in accordance with established mycological methods.
4. Discuss examples of traditional cultural significance of fungi among Indigenous Peoples of the Pacific Northwest.
5. Discuss the significance of fungi as related to aspects of contemporary environmental and human affairs with emphasis on Indigenous Peoples of the Pacific Northwest.
6. Construct a class project on local funga.

# **Course Materials**

## Required Text

Moore, D., Robson, G. D., & Trinci, A. P.J. (2016, December). 21st century guidebook to fungi. Retrieved from http://www.davidmoore.org.uk/21st\_Century\_Guidebook\_to\_Fungi\_PLATINUM/index.htm

[This is an online interactive ebook, which includes all the chapters in Moore, Robson, & Trinci (2011) with updates as of December 2016.]

## Optional Resources and Materials

***Recommended Texts***

Dugan, F. M. (2006). *The identification of fungi: An illustrated introduction with keys, glossary, and guide to literature*. St. Paul, MN: American Phytopathological Society.

Kendrick, B. (2017). *The fifth kingdom: An introduction to mycology* (4th ed.). Indianapolis, IN: Focus.

[Also see the online version of *The Fifth Kingdom*, 3rd edition (Kendrick, 2002, November) below.]

Moore, D., Robson, G. D., & Trinci, A. P. J. (2011). *21st century guidebook to fungi*. New York, NY: Cambridge University Press.

[The hard copy of this book is out of print but may be available in new or used form from various sources, perhaps including the original supplementary CD-ROM. An online interactive ebook (Moore, Robson, & Trinci, 2016) also is available, which includes all the chapters with updates as of December 2016.]

Trudell, S., Ammirati, J. F., & Mello, M. (2009). *Mushrooms of the Pacific Northwest*. Portland, OR: Timber Press.

[This is one of several good books on local mushrooms but is not required for this course.]

***Recommended Websites***

Kendrick, B. (2002, November). *The fifth kingdom online* [Textbook]. Retrieved from Mycologue Publications website: http://mycolog.com/fifthtoc.html

[This online resource includes several chapters and images from *The Fifth Kingdom*, 3rd edition).]

***Required Fieldwork and Lab Tools and Materials***

* Plastic containers or paper collection bags (but not plastic bags)
* Field journal
* Paper for lecture notes and lab illustrations
* Pencil or pen (colored pencils are good for making enhanced illustrations, if desired)

***Recommended Fieldwork and Lab Tools and Materials***

* Clothing and footwear as appropriate for environmental conditions encountered during field trips
* Pocketknife or other plant collection tool (to collect subterranean fungal structures)
* Hand lens or loupe (e.g., 40x 25mm illuminated – see illustration below)

# **Online Support**

This course is supported by a Canvas course site (see above under Instructor Information). In the event of an unscheduled college closure, check the Canvas course site for assignments and updates so that you may continue your academic progress outside of class.

# **Outline/Schedule of Topics & Assignments**

**Week 1**

• Course Introduction

• Syllabus

• Pre-course Knowledge Survey

**I. The Ancient Past: Indigenous Mycological Knowledge**

• Topics & Materials:

• Ethnomycological Considerations of Local Funga

• Reading:

• Moore, Robson, & Trinci (2016), Chapter 1: 21st Century Fungal Communities

• Field/Lab:

• Introduction to collection and identification of local funga utilizing microscopy, taxonomic keys, field guides, and other resources

• Northwest Mushroomers Association Event(s)

• Assignment:

• Obtain required text

• **Due: Pre-course Knowledge Survey at 5:00 pm on Friday**

**Week 2**

**I. The Ancient Past, continued: Fungi Origins, Evolution, and Fossils**

• Formative assessment exercise on course content to date

• Topics & Materials:

• Paleomycological Considerations of Fungi and Lichens

• Readings:

• Moore, et al. (2016), Chapter 2: Evolutionary Origins

• Moore, et al. (2016), Chapter 3: Natural Classification of Fungi

• Moore, et al. (2016), Chapter 4: Hyphal Cell Biology and Growth on Solid Substrates

• Field/Lab:

• Collection and identification of local funga

• Assignments:

• Final Formal Paper

• Class Project

**Week 3**

**II. The Recent Past: History and Development of Mycology**

• Formative assessment exercise on course content to date

• Topics & Materials:

• History and Development of Mycology

• Readings:

• Moore, et al. (2016), Chapter 5: Fungal Cell Biology

• Moore, et al. (2016), Chapter 6: Structure and Synthesis of Fungal Cell Walls

• Moore, et al. (2016), Chapter 7: From the Haploid to the Functional Diploid; Homokaryons, Heterokaryons, Dikaryon and Compatibility

• Field/Lab:

• Collection and identification of local funga

• Assignments:

• Final Formal Paper

• Class Project

**Week 4**

**III. The Present: Current Status of Mycology**

• Formative assessment exercise on course content to date

• Topics & Materials:

• Survey of Fungi

• Mycological Classification, Nomenclature, and Biodiversity

• Excel Spreadsheet: Fungi & Fungi Analogues: Summary of Taxonomy & Characteristics

• Readings:

• Moore, et al. (2016), Chapter 8: Sexual Reproduction: The Basis of Diversity and Taxonomy

• Moore, et al. (2016), Chapter 9: Continuing the Diversity Theme: Cell and Tissue Differentiation

• Moore, et al. (2016), Chapter 10: Fungi in Ecosystems

• Field/Lab:

• Collection and identification of local funga

• Assignments:

• Final Formal Paper

• Class Project

**Week 5**

**III. The Present, continued: Fungi and Human Affairs**

• Formative assessment exercise on course content to date

• Topics & Materials:

• Survey of Fungi, continued

• Mycophagy and Fungi in Food Processing

• Readings:

• Moore, et al. (2016), Chapter 11: Exploiting Fungi for Food

• Field/Lab:

• Collection and identification of local funga

• Assignments:

• Final Formal paper

• Class project

• **Preparation for Mid-term Knowledge Survey**

**Week 6 (Mid-Term)**

**III. The Present, continued: Fungi and Human Affairs**

• Formative assessment exercise on course content to date

• Topics & Materials:

• Survey of Fungi, continued

• Readings:

• Moore, et al. (2016), Chapter 12: Development and Morphogenesis

• Moore, et al. (2016), Chapter 13: Ecosystem Mycology: Saprotrophs, and Mutualisms Between Plants and Fungi

• Field/Lab:

• Collection and identification of local funga

• Special Event: Northwest Mushroomers Association 2018 Wild Mushroom Show (Sunday, October 21, 12-5 pm, Bloedel Donovan Community Building, Bellingham, WA)

• Assignments:

• Final Formal paper

• Class project

• **Due: Mid-term Knowledge Survey**

• **Due: Mid-term Grading** (and faculty-student mid-term assessment meetings)

**Week 7**

• Formative assessment exercise on course content to date

• Topics & Materials:

• Survey of Fungi, continued

• Readings:

• Moore, et al. (2016), Chapter 14: Fungi as Pathogens of Plants

• Moore, et al. (2016), Chapter 15: Fungi as Symbionts and Predators of Animals

• Field/Lab:

• Collection and identification of local funga

• Assignments:

• Final Formal Paper

• Class Project

**Week 8**

• Formative assessment exercise on course content to date

• Topics & Materials:

• Survey of Fungi, continued

• Readings:

• Moore, et al. (2016), Chapter 16: Fungi as Pathogens of Animals, Including Man

• Moore, et al. (2016), Chapter 17: Whole Organism Biotechnology

• Field/Lab:

• Collection and identification of local funga

• Assignments:

• Final Formal Paper

• Class Project

**Week 9**

**IV. The Future: Further Mycological Knowledge Building and Applications**

• Formative assessment exercise on course content to date

• Topics & Materials:

• Fungal Molecular Genetics and the Future of Mycology

• Practical Aspects and Applications of Fungi in the Home and Garden

• Reading:

• Moore, et al. (2016), Chapter 18: Molecular Biotechnology

• Field/Lab:

• Collection and identification of local funga

• Assignments:

• Final Formal Paper

• Class Project

• **Due: Draft Formal Paper at 5:00 pm on Friday**

**Week 10**

• Formative assessment exercise on course content to date

• Topics & Materials:

• Mycoremediation

• Field/Lab:

• Collection and identification of local funga

• Assignments: Class project

**Week 11**

• Topics & Materials:

• Development of exhibit on local funga

• Field/Lab:

• Development of exhibit on local funga

• Class Discussion of Final Student Papers

**Week 12**

• Course Conclusion

• Assignments:

• Class project

• Final Knowledge Survey

• Self-assessment of Learning

• **Due: Class Project Part A: Checklist of Local Funga**

• **Due: Class Project Part B: Exhibit of Local Funga**

• **Due: Final Knowledge Survey**

• **Due: Self-assessment of Learning at 12:00 pm on the last day of the quarter**

# **Evaluation & Assessment—Requirements, Assignments, & Grading**

In this course, I will use the term ***evaluation*** (which may also be referred to as ***summative assessment***) to refer to the process of reviewing students' course requirements and assignments for the purpose of determining their value as related to a standard (such as one or more course rubrics) and to determine the grade students have earned as indicated below. I will also engage in ***formative assessment*** for each student with the goal of providing ongoing feedback that I and students may use to improve our teaching and learning ("Whys and Hows," n.d.). In addition, I may be requested to review the overall results of this course for the purposes of Bachelor of Science in Native Environmental Science ***program assessment***. This latter assessment has no impact on the grade you will earn in this course but has the goal of improving this course and that program. Finally, ***self-assessment*** of student learning is included in this course, which may include student engagement in self-reflection and metacognition (i.e., thinking about one's thinking) to determine not only what students have learned but how they have learned it with a view to improving their learning strategies in the future (Gooblar, 2015, cf. Rolheiser & Ross, 2013). A potential additional goal of self-assessment is to help students be better equipped to provide feedback on this course and my efforts.

## Requirements & Assignments

***Note: This course is based on a total of 100 possible points, including elements as indicated below.***

1. **Attendance and Participation** (0 points or 0% of final grade)

(Attendance will be recorded and reported to Enrollment Services for financial aid purposes but will not contribute points for grading purposes. That being said, attendance and participation are essential to the successful completion of this course.)

1. **Pre-course Knowledge Survey** (5 points or 5% of final grade)

(This is a brief written assignment to address the approved course outcomes. Complete assignments that address each course outcome will receive all the possible points.)

1. **Mid-term Knowledge Survey** (15 points or 15% of final grade)

(This will involve student work regarding learning with a focus on course outcomes up to the mid-term.)

1. **Final Knowledge Survey** (20 points or 20% of final grade)

(This will involve student work regarding learning with a focus on course outcomes up to the end of the term.)

1. **Final Formal Paper** (25 points or 25% of final grade)

(For this course, this assignment may take various forms. For example, students may choose to research, write on, and present on various mycological topics, or they may choose to address a topic using a monographic approach, to be further defined in class. Student work should seek to address one or more course outcomes in this assignment.)

(Formal written research reports consist of seven (7) pages, not counting the separate title page, abstract page, and references section. They should include a minimum of four (4) references. These are to be produced in accordance with APA [American Psychological Association] Style guidelines, submitted in electronic form, and to address editorial review and feedback to be eligible for full credit. They will be evaluated according to the corresponding rubric presented in the appendix to this syllabus. Complete assignments will receive all the possible points. Note: An assignment template is available upon request from the instructor.)

1. **Class Project Part A—Checklist of Local Funga** (15 points or 15% of final grade)

(This will consist of a group effort regarding a final list of all fungal species observed, collected, and identified during the term.)

1. **Class Project Part B—Exhibit of Local Funga** (15 points or 15% of final grade)

(This will consist of a group effort to construct an exhibit of local funga for presentation at the end of the term.)

1. **Self-assessment of Learning** (5 points or 5% of final grade)

(This should consist of a written report on 1) what you consider to be important knowledge and skills that you gained from this course, 2) what you regard as positive efforts on your part that have contributed to your success in this course, 3) limiters or barriers to your attainment of course learning outcomes, and 4) details regarding the grade you believe you earned in this course. This assignment does not need to comply with APA Style guidelines and is not subject to editorial review and feedback.)

## Grading

***Note that students must complete course requirements as described in this syllabus to be eligible for receiving a grade for this course. Northwest Indian College uses the following symbols for grading courses:***

* + - * A: The student has met or exceeded the highest level of the course requirements.
      * B: The student has met the course requirements above the satisfactory level.
      * C: The student has met the course requirements at the satisfactory level.
      * D: The student has met the course requirements at the minimum level. However, the student has not met all of the course requirements at the satisfactory level.
      * F: The student has not met the course requirements at the minimum level.

***In this course, the following points and percentages will be associated with letter grades:***

Grade Points Earned Percentage

A 95-100 95-100%

A- 90-94 90-94%

B+ 86-89 86-89%

B 85 85%

B- 80-84 80-84%

C+ 76-79 76-79%

C 75 75%

C- 70-74 70-74%

D+ 66-69 66-69%

D 65 65%

D- 60-64 60-64%

F 0-59 0-59%

**Please also note the following important details regarding grading.**

* **Incomplete Agreement Policy Statement:** If a student has been making consistent progress and has regular attendance, but some essential requirement of the course has not been completed because of unforeseen circumstances the student has the option to request to enter into an incomplete agreement. **The deadline to request an incomplete agreement is the last day of the quarter.** It is the instructor’s discretion whether to accept the student’s request. When the instructor submits an incomplete agreement for a student, included should be:
  + The grade earned by the student on the date that the incomplete agreement is submitted,
  + A detailed list of remaining work to be completed, and
  + A deadline for the completion of that work. (The deadline is not to extend longer than two consecutive quarters.)
* **Grade Change Policy:** Grade and designation of *Incomplete* recorded by the registrar at the end of a quarter will be considered final and not be changed except in the following cases:
  + When a letter grade is submitted to replace the incomplete, by the instructor of record or, if the instructor of record is no longer employed by NWIC, by the Dean of Academics.
  + When a grade resulting from an error, such as a computation error, is corrected by the instructor of record; the request for change to correct these errors may only be made by the instructor of record, before the beginning of blue-slip week (second week of the quarter) or the following quarter.
  + When an error committed in the administrative recording process is corrected by the registrar’s office.
  + When a student’s grade appeal has been adjudicated, as outlined in the grievance procedure in the *Student Handbook*.

**IMPORTANT NOTE**: Details regarding the Incomplete Agreement and Grade Change policies appear in the *2017-2019 Northwest Indian College Catalog*. **Please also note that your instructor for this course requires completion before the end of the quarter of a written Incomplete Agreement Request Form, which is available upon request, and documentation of the compelling reason for agreeing to pursue an incomplete agreement, such as evidence of medical emergency, etc.**

* **Other Considerations**
  + Completion of an assignment does not ensure receipt of full credit for that assignment. I will evaluate your work for its promptness, appropriateness, completeness, quality, and relationship to one or more evaluation rubrics. All work must be completed as indicated elsewhere in this syllabus or—only with prior permission of the instructor and because of unavoidable circumstances—by noon of the last day of the quarter unless an Incomplete Agreement is requested and completed as indicated above.
  + Grade qualifiers (- or +) may accompany your final grade depending upon various factors to be determined by your instructor with respect to the promptness and quality of your efforts.

# **Appendix: Additional Syllabus Information**

## Course Overview

**What are fungi?** Fungi are those organisms included in the Kingdom Fungi (and sometimes the Division or Phylum Eumycota, or true fungi), which are different from all other broad categories of other organisms such as plants, animals, etc. based on biological species concepts, phylogenetic, and evolutionary considerations. However, other fungus-like organisms (referred to variously as pseudofungi, untrue fungi, fungal analogues, etc.) may also be regarded as fungi in a broader sense primarily based on morphological or other considerations. This course will include aspects of the history of mycology, the taxonomic and evolutionary complexities of fungi, and many other topics with the goals of increasing awareness and appreciation for the diversity, environmental significance, and various ways that fungi are important to humans. Other goals include fostering the development of enhanced scientific vocabulary and associated concepts and introducing students to many representatives of local funga. (*Funga*, or *fungal flora*, refers to all the fungi in an area and is comparable to the more commonly-encountered terms *flora*, meaning all the plants in an area, and *fauna*, meaning all the animals in an area).

**Seasonal Considerations:** One approach to the study of mycology may involve consideration of the taxonomic progression from "lower" (microscopic fungi or micromycetes) to "higher" fungi. However, in this course, "higher" fungi (macroscopic fungi—or macromycetes—such as mushrooms and other ascomycetes and basidiomycetes) will be addressed early while they are abundant and accessible in fruiting condition in our area during the fall (usually beginning as early as mid-to-late September, depending on altitude) and spring (as late as around mid-June, depending on altitude). Some fungi (such as many shelf fungi) produce perennial structures that may be observed throughout the year and over the course of several years. Other fungi, such as those encountered in household conditions (especially molds), may be observed whenever favorable conditions are present. Still others may be cultured under controlled conditions to study or otherwise use them as food, medicine, or for other applications.

**The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP, in part):** The statement that "Indigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals" appears in Article 24, Paragraph 1 of the UNDRIP. In addition, "Indigenous peoples have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard" appears in Article 25 of the UNDRIP. "Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions" appears in Article 31, Paragraph 1 in the UNDRIP (United Nations, n.d.).

**Fungi and Coast Salish Considerations at Northwest Indian College:** You are encouraged to consider our work together in this course in light of the Lummi beliefs, which are included in the *2017-2019 Northwest Indian College Catalog*:

* **sela-lexw**: Our strength comes from the old people. From them we receive our teachings and knowledge and the advice we need for our daily lives.
* **schtengexwen**: We are responsible to protect our territory. This means that we take care of our land and the water and everything that is on and in it.
* **xwlemi-chosen**: Our culture is our language. We should strengthen and maintain our language.
* **leng-e-sot**: We take care of ourselves, watch out for ourselves and love and take care of one another.
* **xaalh**: Life balance/sacred (an additional belief not included in the *2017-2019 Northwest Indian College Catalog*.)

## Course Policies

1. **Student Rights & Responsibilities:** These will be observed as described in the *2017-2019 Northwest Indian College Catalog* and in accordance with Northwest Indian College policies.
2. **Attendance & Participation:** Regular attendance and participation are essential to your success in this course. It is your responsibility to attend class meetings regularly and on time. **If you may arrive to class late, please be mindful that the course work has already begun and that class interruptions may negatively impact your classmates’ and the instructor’s efforts regarding teaching and learning. Necessary absences should be reported to your instructor and multiple unexcused absences may result in grade reductions that could prevent you from passing this course.**

**VERY IMPORTANT NOTE: Students must attend at least one (1) class for their financial aid to be disbursed. If attendance is not logged for a student for two (2) weeks, a return of funds must be calculated. NWIC has 45 days from the last date of attendance to return the Title IV funds. Financial Aid will check attendance every Thursday.**

1. **Assignments & Due Dates:** All assignments are to be submitted as indicated by the instructor and in supporting course materials. You must complete your work as indicated in this syllabus and in class or you will not receive credit for that work. Unless otherwise instructed, you are required to submit your work in electronic format (i.e., Microsoft Word) via Email to Brian Compton at bcompton@nwic.edu. I will not accept late assignments without prior approval.
2. **Evaluation & Grades:** The grades that I will report on the class grade roster at the end of the quarter may be determined through evaluation as detailed in this syllabus and described in class and course materials.
3. **Electronic Devices (e.g., cell phones and laptop computers):** Please be sure to reserve cell phone and laptop use for outside of class unless they are being used with the instructor's approval and in direct support of your on-task course work.
4. **Email:** I will use your NWIC Email address to communicate with you in this course, so you must access it to receive any messages that I send to you via that address. Please use your NWIC Email address to communicate with me and notify the Information Services Department immediately if you experience any difficulties with your student account to help ensure effective communication with me.

## Lummi Beliefs

The educational philosophy of Northwest Indian College is based upon the acknowledgement that Tribal values and beliefs are the foundation of education and must include a study of Native American culture, language, and history within the Tribal community. The College's extended campus sites participate by identifying the values and believes that underlie the educational approach appropriate to their communities' needs.

* **sela-lexw**—Our strength comes from the old people. From them we received our teachings and knowledge and the advice we need for our daily lives.
* **schtengexwen**—We are responsible to protect our territory. This means that we take care of our land and the water and everything that is on it and in it.
* **xwlemi-chosen**—Our culture is our language. We should strengthen and maintain our language.
* **leng-e-sot**—We take care of ourselves, watch out for ourselves and love and take care of each other.
* **xaalth**—Balance.

## Institutional and Program Outcomes

***NWIC Institutional Outcomes***

The institutional outcomes that this course seeks to support are highlighted in bold below:

1. **Native Leadership—To Acquire a Quality Education**
   1. **Effectively communicate in diverse situations, from receiving to expressing information, both verbally and non-verbally**
   2. Use analytical and critical thinking skills to draw and interpret conclusions from multiple perspectives including Indigenous theory and methods
2. Way of Life—To Give Back
   1. Demonstrate knowledge of what it means to be a people
   2. Practice community building through service learning
3. **Inherent Rights—To Apply Indigenous Knowledge**
   1. **Exhibit a sense of place**
   2. Recognize Tribal rights as they relate to human rights
4. **Community Minded—To Utilize Education Through Work**
   1. Meet the technological challenges of a modern world
   2. **Work cooperatively toward a common goal**

***Bachelor of Science in Native Environmental Science (BSNES) Program Outcomes***

The program outcomes that this course seeks to support are highlighted in bold below:

1. **Sense of Place**
   1. **Value the interrelationships between people and the environment.**
   2. **Ground and apply concepts and methodologies to place.**
2. **Relationality**
   1. **Demonstrate self-location within inquiry-based research.**
   2. **Value relationality in the practice of Native Environmental Science.**
   3. Evaluate and interpret environmental laws, policies, and acquired rights, and advocate for inherent rights.
3. Inquiry
   1. Use Indigenous theories and methods to conduct inquiry-based research and evaluation that respond to the needs of Indigenous communities and serve to promote Indigenous self-determination.
   2. Evaluate and use appropriate technologies for inquiry-based research in support of restoration and revitalization of the environment.
   3. Evaluate and apply quantitative, qualitative, and mixed methodologies and concepts that include the synthesis of complex information.
4. **Communication**
   1. **Communicate using oral, written, and graphical (visual) methods to support Indigenous self-determination.**
   2. Communicate effectively to multiple audiences, including Indigenous communities, policy makers, scientific communities, and the general public.

## Science Writing Mentor Information

Please note that this course involves several writing assignments that are to be developed through collaboration with the Science Writing Mentor at Northwest Indian College, whose contact and availability information is presented below. Please consult with her for further details regarding her availability and turn-around time for reviewing and providing editorial feedback on writing assignments.

***Writing Mentor:*** Lynda Jensen, M.A.

***Office Location:*** When not in class, Ms. Jensen is most reliably found in her office in the Testing Center (in Building 17) or in the Science Lounge (room NE106 in Building 16).

***Mentor Hours:*** Please check with Ms. Jensen.

***Telephone:*** (360) 392-4303

***Email:*** ljensen@nwic.edu

## Rubrics

***Rubric for Formal Paper***

|  |  |
| --- | --- |
| **Evaluation Attribute** | **Possible Points** |
| **Complete & Concise:** All components of the assignment are included, and writing is economical and direct. | 5 |
| **Correctness:** All required components are correctly developed and presented. All aspects of grammar, spelling, punctuation and word choice are present. | 5 |
| **Coherence (& Control):** Content is presented logically and in a unified manner with good flow, paragraph construction, sentence content, etc. | 5 |
| **Clarity:** Writing is clear and unconfused and relates directly to the stated assignment objective(s). | 5 |
| **Content & Course Outcomes:** Writing shows evidence of full and complete comprehension of subject matter, content communicated is substantial and relevant, and one or more course outcomes are appropriately addressed. | 5 |
| **All Attributes** | **25 total points possible** |

***Rubric for Checklist of Local Funga***

|  |  |
| --- | --- |
| **Evaluation Attribute** | **Possible Points** |
| **Complete & Concise:** All components of mycological nomenclature and classification are present and concisely presented. | 3 |
| **Correctness:** All required components are correctly developed and presented. All aspects of spelling, formatting, and other mycological writing conventions are present. | 3 |
| **Coherence (& Control):** Content is presented logically and in a unified manner, etc. | 3 |
| **Clarity:** Writing is clear and unconfused and relates directly to the stated assignment objective(s). | 3 |
| **Content & Course Outcomes:** Writing shows evidence of full and complete comprehension of subject matter, content communicated is substantial and relevant, and one or more course outcomes are appropriately addressed. | 3 |
| **All Attributes** | **15 total points possible** |

***Rubric for Exhibit of Local Funga***

|  |  |
| --- | --- |
| **Evaluation Attribute** | **Possible Points** |
| **Complete & Concise:** All components of mycological nomenclature and classification are present and concisely presented. | 3 |
| **Correctness:** All required components are correctly developed and presented. All aspects of spelling, formatting, and other mycological writing conventions are present. | 3 |
| **Coherence (& Control):** Content is presented logically and in a unified manner, etc. | 3 |
| **Clarity:** Writing is clear and unconfused and relates directly to the stated assignment objective(s). | 3 |
| **Content & Course Outcomes:** Writing shows evidence of full and complete comprehension of subject matter, content communicated is substantial and relevant, and one or more course outcomes are appropriately addressed. | 3 |
| **All Attributes** | **15 total points possible** |

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