**General Education Competency Assessment Plan**

*May 31, 2024 Update*

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This document describes Virginia Western Community College’s (VWCC) plan for the assessment of general education competencies.

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## **Critical Thinking**

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**Definition:** Critical thinking is the ability to use information, ideas, and arguments from relevant perspectives to make sense of complex issues and solve problems. Degree-seeking students (AA, AS, AAS) will locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.

**Outcome(s):** Degree-seeking students (AA, AS, AAS) will be able to:

**LO1:** Identify and summarize key issues.

**LO2:** Identify key assumptions.

**LO3:** Provide accurate evidence.

**LO4:** Present logical conclusions.

**Goal(s):**

1. Students will have an average score of 3.00 or better when assessed via the critical thinking rubric. The maximum score is 4.00.
2. Graduates will have an average satisfaction score with their critical thinking education of 3.00 or better. The maximum score is 4.00.
3. Alumni will have an average satisfaction score with their critical thinking education of 4.00 or better. The maximum score is 5.00.

**Measures:**

*Direct assessments:*

Virginia Western uses an artifact-based approach for general education assessment. Fall and Spring, faculty identify courses that will submit artifacts to be assessed based on the competencies addressed that year. Faculty then submit the rubric for faculty-determined assignments in the identified class using Canvas and the Outcome Measures Feature. The Institutional Effectiveness Office has a target goal of 10% of program-placed students will be assessed. The assignments are scored by the faculty using a four-point rubric (Excellent, Good, Acceptable, and Needs Improvement). For AY 2023-24, 1,418 artifacts were assessed for 1,072 unique students for the Critical Thinking General Education Assessment. This represents 23.3% of the target population, program placed students (n=4,600).

In AY 2023-24, artifacts were collected from the following 43 courses:

|  |
| --- |
| * ADJ 140 |
| * AST 141 |
| * AST 153 |
| * AST 155 |
| * AST 205 |
| * AST 238 |
| * AST 243 |
| * AST 244 |
| * BIO 101 |
| * BIO 102 |
| * BIO 141 |
| * BIO 142 |
| * BIO 250 |
| * BIO 251 |
| * BIO 255 |
| * CHD 120 |
| * CHD 205 |
| * CHD 216 |
| * CHM 101 |
| * CHM 111 |
| * CHM 112 |
| * CST 100 |
| * ECO 201 |
| * ECO 202 |
| * EDE 11 |
| * ENG 111 |
| * ENG 112 |
| * ENG 246 |
| * GEO 210 |
| * HIS 111 |
| * HIS 121 |
| * HIS 122 |
| * ITE 140 |
| * ITE 152 |
| * MTH 154 |
| * MTH 161 |
| * PHY 241 |
| * PHY 242 |
| * PLS 136 |
| * PSY 200 |
| * PSY 230 |
| * PTH 226 |
| * ROC 145 |

The rubric used as has been provided below:

**Critical Thinking Rubric**

**Revised 3/13/19**

Critical Thinking: A competent critical thinker has the ability to use information, ideas and arguments from relevant perspectives to make sense of complex issues and solve problems. This includes being able to locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Critical Thinking Component** | **Excellent-4** | **Good-3** | **Acceptable-2** | **Needs Improvement-1** |
| **Identifies and summarizes issues** | Student identifies and clearly states the basics of the issue | Student states the main issue but description leaves some terms undefined | Student states the main issue but description leaves most terms undefined | Student does not identify and summarize the problem, or identifies a different or inappropriate problem |
| **Key assumptions** | Student identifies and questions the validity of the key assumptions | Student identifies most of the key assumptions and questions some of the assumptions | Student identifies most of the key assumptions and minimally questions some of the assumptions | Student does not examine the assumptions that underlie the issue |
| **Quality of evidence** | Student presents evidence and thoroughly questions its accuracy and relevance | Student presents evidence and questions its accuracy and relevance | Student presents evidence but fails to question its accuracy and relevance | Student merely repeats information taking it as truth or denies evidence without adequate justification. |
| **Conclusions** | Student presents logical conclusions | Student presents logical conclusions with minor flaws | Student attempts to present a conclusion. | Student fails to identify conclusions |

*Indirect assessment:*

The Graduate Exit Survey will be administered to all degree-seeking students (AA, AS, AAS) expected to graduate. Questions are assessed on a 4-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the critical thinking competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Critical Thinking: ability to make sense of complex issues.

The Alumni Survey will be administered to all graduates and students that did not return to Virginia Western within one academic year. Questions are assessed on a 5-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the critical thinking competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Critical Thinking: ability to make sense of complex issues.

**Schedule:** Critical Thinking was assessed in Fall 2023 and Spring 2024 using the Critical Thinking Rubric. The indirect assessment via the Graduate Exit and Alumni Survey is conducted and reported annually. The Graduate Exit and Alumni Surveys are administered by the Institutional Effectiveness Office (IEO). Results from the embedded, course-level assessments were aggregated by IEO office. No assessments were administered during the summer semester.

**Communication of findings:** Reports for each competency assessed in the previous academic year will be created by IEO during the summer and presented to the Assessment Team for review and approval by September 15th the following fall. Data will be presented in a disaggregated form to allow for student achievement disparities to be identified by race, gender, age range, and modality. The approved reports are then disseminated to the Vice President for Academic and Workforce Solutions, the academic deans, and the program heads who are tasked with further dissemination of the reports to the appropriate faculty. A summary of the report is shared during Fall in-service. Reports will be publicly available in the general education section of the IE website.

**Use of findings:** The data will be analyzed by the Assessment Team who develops the action plan. Action plans for SLOs that have not met or partially met benchmarks will be developed and are implemented by faculty at the course-level and reassessed in the next cycle.

## **Written Communication**

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**Definition:** Written Communication is the ability to develop, convey, and exchange ideas in writing, as appropriate to a given context and audience. Degree-seeking students (AA, AS, AAS) will express themselves effectively in a variety of written forms.

**Outcome(s): Degree-seeking students (AA, AS, AAS**) **will be able to:**

**LO1:** Organize content in a logical order.

**LO2:** Create a well-stated thesis.

**LO3:** Create well-developed paragraphs supporting thesis.

**LO4:** Create a well-developed conclusion.

**LO5:** Use proper grammar, spelling, and sentence structure.

**LO6:** Use proper word choice.

**Goals:**

1. Students will have an average score of 3.00 or better when assessed via the written communication rubric. The maximum score is 4.00.
2. Graduates will have an average satisfaction score with their written communication education of 4.00 or better. The maximum score is 5.00.
3. Alumni will have an average satisfaction score with their written communication education of 4.00 or better. The maximum score is 5.00.

**Measures:**

*Direct assessments:*

Virginia Western uses an artifact-based approach for general education assessment. Fall and Spring, faculty identify courses that will submit artifacts to be assessed based on the competencies addressed that year. Faculty then submit the rubric for faculty-determined assignments in the identified class using Canvas and the Outcome Measures Feature. The Institutional Effectiveness Office has a target goal of 10% of program-placed students will be assessed. The assignments are scored by the faculty using a four-point rubric (Excellent, Good, Acceptable, and Needs Improvement). For AY 2022-23, 1,305 artifacts were assessed for 1,049 unique students for the Written Communication General Education Assessment. This represents 23.6% of the target population, program placed students (n=4,446).

These artifact-based assessments were course-embedded in the following classes:

* ADJ 140
* ADJ 227
* ADJ 229
* AST 205
* BIO 101
* BIO 102
* BIO 141
* BIO 142
* BIO 252
* BUS 165
* CHD 118
* CHD 165
* CHD 205
* CHD 216
* CHM 111
* CHM 112
* CST 100
* ENG 111
* ENG 112
* ENG 246
* ENG 275
* HIS 102
* HIS 111
* HIS 121
* HIS 122
* HRI 206
* HRI 255
* LGL 215
* LGL 225
* NSG 170
* PHY 241
* PLS 136
* PSY 200
* PSY 230
* PSY 235
* PSY 236
* PTH 115
* RAD 125
* RAD 240
* ROC 115
* SDV 101
* SOC 200
* SOC 266

The rubric used as has been provided below:

**Written Communication Rubric  
Revised January 2019**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Written Communication: A competent written communicator can develop, convey and exchange ideas in writing, as appropriate to a given context and audience.** | | | | | |
|  | **Excellent-4** | **Good-3** | **Acceptable-2** | **Needs Improvement-1** |
| **Organize content in a logical order** | Student generates abundant and logically sound content. Organizes that content into logical order. | Student generates sufficient and logically sound content. Organizes that content into logical order. | Student generates a moderate amount of content. Organizes content with only minor logical weakness. | Student generates little or logically weak content. Fails to organize content into logical order. |
| **Create a well-stated thesis** | Presents an introduction featuring a well-stated thesis. | Presents an introduction featuring a thesis. | Presents an introduction without a thesis. | Does not present an introduction or a well-stated thesis. |
| **Create well-developed paragraphs supporting thesis** | Uses a series of cohesive, well-developed body paragraphs. Supports that thesis through topic sentences relevant to the thesis. Supports each topic sentence thoroughly with relevant information and sound logic. | Uses a series of cohesive, well-developed body paragraphs. Supports that thesis through topic sentences relevant to the thesis. Supports each topic sentence with sufficient information and sound logic. | Uses a series of body paragraphs. Supports that thesis through topic sentences relevant to the thesis. Supports each topic sentence with relevant information and reasonable logic. | Does not thoroughly and logically support the thesis through body paragraphs. |
| **Create a well-developed conclusion** | Ends with a well-developed conclusion that restates the thesis. | Ends with a conclusion that restates the thesis. | Ends with a conclusion. | Does not end with a conclusion. |
| **Use proper grammar, spelling, and sentence structure.** | Rare error in basic grammar and spelling. Sophisticated, varied sentence structure. | Few errors in basic grammar. Few misspelled words. Some variety of sentence structure. | Occasional errors in basic grammar. Words occasionally misspelled. Little variety in sentence structure. | Frequent errors in basic grammar. Simple words misspelled. No variety or sophistication in sentence structure. |
| **Use proper word choice** | Precise word choice. More sophisticated vocabulary. | Word choice generally correct, precise, and effective. Successful attempt at more sophisticated vocabulary | Words occasionally misused. Little attempt beyond everyday vocabulary. | Basic words often misused or confused. No attempt beyond everyday vocabulary. |

*Indirect assessment:*

The Graduate Exit Survey will be administered to all degree-seeking students (AA, AS, AAS) students. Questions are assessed on a 5-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the written communication competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Written Communication: ability to convey ideas appropriately in writing.

The Alumni Survey will be administered to all graduates and students that did not return to Virginia Western within one academic year. Questions are assessed on a 5-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the written communication competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Written Communication: ability to convey ideas appropriately in writing.

**Schedule:** Written Communication was assessed in Fall 2022 and Spring 2023 using the Written Communication Rubric. The indirect assessment via the Graduate Exit and Alumni Survey is conducted and reported annually. The Graduate Exit and Alumni Surveys are administered by the Institutional Effectiveness Office (IEO). Results from the embedded, course-level assessments were aggregated by IEO office. No assessments were administered during the summer semester.

**Communication of findings:** Reports for each competency assessed in the previous academic year will be created by IEO during the summer and presented to the Assessment Team for review and approval by September 15th the following fall. Data will be presented in a disaggregated form to allow for student achievement disparities to be identified by race, gender, age range, and modality. The approved reports are then disseminated to the Vice President for Academic and Workforce Solutions, the academic deans, and the program heads who are tasked with further dissemination of the reports to the appropriate faculty. A summary of the report is shared during Fall in-service. Reports will be publicly available in the general education section of the IE website.

**Use of findings:** The data will be analyzed by the Assessment Team who develops the action plan. Action plans for SLOs that have not met or partially met benchmarks will be developed and are implemented by faculty at the course-level and reassessed in the next cycle.

## **Civic Engagement**

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**Definition:** Civic Engagement is the ability to contribute to the civic life and well-being of local, national, and global communities as both a social responsibility and a life-long learning process. Degree-seeking students (AA, AS, AAS) will demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society. Using the rubric for direct assessment, the target is for students to score a 3 or better. The threshold of acceptability is 2. Virginia Western has established that 75% of artifacts will meet the threshold.

**Outcome(s):** Degree-seeking (AA, AS, AAS) students will be able to:

**LO1:** Analyzes knowledge (facts, theories, etc.) from one's own academic study/field/discipline making relevant connections to civic engagement.s  
  
**LO2:** Provides evidence of experience in civic-engagement activities and describes what she/he has learned about her or himself as it relates to a growing sense of civic identity.

**LO3:** Effectively communicates in civic context, showing ability to do all of the following: express, listen, and adapt ideas and messages based on others' perspectives.

**LO4:** Participates in civically focused actions and reflects or describes how these actions may benefit individual(s) or communities.

**Goal(s):**

1. Students will have an average score of 3.00 or better when assessed via the civic engagement rubric. The maximum score is 4.00.
2. Graduates will have an average satisfaction score with their civic engagement education of 4.00 or better. The maximum score is 5.00.
3. Alumni will have an average satisfaction score with their civic engagement education of 4.00 or better. The maximum score is 5.00.
4. 60% of eligible Virginia Western students will vote in the 2020 national elections.

**Measures:**

*Direct assessments:*

Course-embedded assessments are being identified for each of the four outcomes and assessment data will be collected from faculty in the following courses:

* SOC 200
* PSY 200
* ENG 241

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Civic Engagement**  Civic Engagement is the ability to contribute to the civic life and well-being of local, national, and global communities as both a social responsibility and a life-long learning process. Degree graduates will demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society. | | | | |
| **Criteria** | **Assessment Levels** | | | |
| **Excellent-4** | **Good-3** | **Acceptable-2** | **Needs Improvement-1** |
| **Analysis of Knowledge** | Analyzes knowledge (facts, theories, etc.) from one's own academic study/field/discipline making relevant connections to civic engagement | Begins to connect knowledge (facts, theories, etc.) from one's own academic study/field/discipline to civic engagement | Begins to identify knowledge (facts, theories, etc.) from one's own academic study/field/discipline that is relevant to civic engagement. | Struggles to identify knowledge (facts, theories, etc.) from one's own academic study/field/discipline that is relevant to civic engagement. |
| **Civic Identity and Commitment** | Provides evidence of experience in civic-engagement activities **AND** describes what she/he has learned about her or himself as it relates to a growing sense of civic identity. | Provides evidence of experience in civic-engagement activities **OR** describes what she/he has learned about her or himself as it relates to a growing sense of civic identity. | Evidence suggests involvement in civic-engagement activities is generated from expectations or course requirements rather than from a sense of civic identity. | Provides little evidence of her/his experience in civic-engagement activities and does not connect experiences to civic identity. |
| **Civic Communication** | Effectively communicates in civic context, showing ability to do all of the following:  express, listen, and adapt ideas and messages based on others' perspectives. | Communicates in civic context, showing ability to do more than one of the following:  express, listen, or adapt ideas and messages based on others' perspectives. | Communicates in civic context, showing ability to do one of the following: express, listen, or adapt ideas and messages based on others' perspectives. | Struggles to communicate in civic context and does not demonstrate the ability to do any of the following: express, listen, or adapt ideas and messages based on others' perspectives. |
| **Civic Action and Reflection** | Has clearly *participated* in civically focused actions and reflects or describes how these actions may benefit individual(s) or communities. | Has *begun to* *participate* in civically focused actions and begins to reflect or describe how these actions may benefit individual(s) or communities. | Has *experimented* with some civic activities but shows little understanding of how these actions may benefit individual(s) or communities. | Has not *explored* civic activities or shown any understanding of how these actions may benefit individual(s) or communities. |

The rubric used as has been provided below:

*Indirect assessment:*

VWCC will participate in the National Study of Learning, Voting, and Engagement (NSLVE) at Tuft University’s Institute for Democracy and Higher Education. NSLVE offers the College the opportunity to learn about its student registration and voting rates and the climate for political learning and engagements. This assessment aligns to SLO 1. Currently enrolled students who are over the age of 18; are not non-resident aliens; and do not have a FERPA record block will be assessed.

The Graduate Exit Survey will be administered to all degree graduate students. Questions are assessed on a 5-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the civic engagement competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Civic Engagement: ability to contribute to the civic life of the community.

The Alumni Survey will be administered to all graduates and students that did not return to Virginia Western within one academic year. Questions are assessed on a 5-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the civic engagement competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Civic Engagement: ability to contribute to the civic life of the community.

**Schedule:** Civic Engagement was assessed in Fall 2021 and Spring 2022 using the Civic Engagement Rubric. The indirect assessment via the Graduate Exit and Alumni Survey is conducted and reported annually. The Graduate Exit and Alumni Surveys are administered by the Institutional Effectiveness Office (IEO). Results from the embedded, course-level assessments were aggregated by IEO office. No assessments were administered during the summer semester.

**Communication of findings:** Reports for each competency assessed in the previous academic year will be created by IEO during the summer and presented to the Assessment Team for review and approval by September 15th the following fall. Data will be presented in a disaggregated form to allow for student achievement disparities to be identified by race, gender, age range, and modality. The approved reports are then disseminated to the Vice President for Academic and Workforce Solutions, the academic deans, and the program heads who are tasked with further dissemination of the reports to the appropriate faculty. A summary of the report is shared during Fall in-service. Reports will be publicly available in the general education section of the IE website.

**Use of findings:** The data will be analyzed by the Assessment Team who develops the action plan. Action plans for SLOs that have not met or partially met benchmarks will be developed and are implemented by faculty at the course-level and reassessed in the next cycle.

## **Professional Readiness**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Definition:** Professional Readiness is the ability to work well with others and display situationally and culturally appropriate demeanor and behavior. Degree-seeking students (AA, AS, AAS) will demonstrate skills important for successful transition into the workplace and pursuit of further education.

**Outcome(s):** Degree-seeking (AA, AS, and AAS) students will be able to:

**LO1:** Attend/participate in class regularly.  
  
**LO2:** Demonstrate effective time management skills.

**LO3:** Demonstrate professional workplace demeanor.

**LO4:** Use clear, concise language when communicating.

**LO5:** Illustrate planning and effort to provide high quality work.

**LO6:** Work well with others .

**Goal(s):**

1. Students will have an average score of 3.00 or better when assessed via the professional readiness rubric. The maximum score is 4.00.
2. Graduates will have an average satisfaction score with their professional readiness education of 4.00 or better. The maximum score is 5.00.
3. Alumni will have an average satisfaction score with their professional readiness education of 4.00 or better. The maximum score is 5.00.

**Measures:**

*Direct assessments:*

Course-embedded assessments are being identified for each of the four outcomes and assessment data will be collected from faculty in the following courses:

* CSC 201
* MTH 161
* BIO 101
* BIO 251
* BIO 252
* PNG 125
* CST 100
* PSY 200
* AGR 141
* MDL 236
* NSG 230

The rubric used as has been provided below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Professional Readiness Rubric** | | | | |
| **Criteria** | **Assessment Levels** | | | |
| **Excellent-4** | **Good-3** | **Acceptable-2** | **Needs Improvement-1** |
| **Attendance** | Notifies instructor prior to absence with a valid excuse or after absence due to extraordinary circumstances. Misses no more than 5% of class meetings | Rarely misses class; notifies instructor prior to absences with a valid reason or after absence due to extraordinary circumstances. Misses no more than 10% of class meetings | Occasionally does not attend class regularly. Does not notify instructor of all absences or provides unacceptable reasons for absence. Misses more than 10% of class time. | Does not attend class on any regular basis. Does not communicate with instructor. |
| **Time Management** | Rarely late for class; no late work; demonstrates self-responsibility; comes to class prepared and always maximizes class time | Is more than 5 minutes late for class and/or submits work late less than 10% of the time; regularly comes to class prepared and maximizes class times | Is more than 5 minutes late for class and/or submits work late more than 10% of the time; Frequently does not come to class prepared; poor use of class time. | Is regularly late for class and rarely submits work. Is not prepared for class and does not utilize class time. |
| **Work Place Demeanor** | Always demonstrates positive attitude self-control, good personal presentation and traits of life-long learning including inquisition and curiosity; follows rules of the class. | Generally positive; embraces life-long learning; demonstrates appropriate personal presentation; typically follows rules of the class. | Generally, resists new ideas and skills; may use language that degrades or puts down classmates; demonstrates poor personal presentation; does not follow rules of the class. | Rejects new ideas and skills; uses derogatory language; shows indifference towards personal presentation; challenges rules of the class. |
| **Communication**  **Skills** | Consistently uses clear, organized, concise language; integrates appropriate language learned in course; effectively exchanges ideas and information; uses Creator language instead of Victim language; fully understands the importance of tone in both written and oral communication | Generally, uses clear/organized language for exchanging ideas and information; consistent use of Creator language; partially understands the importance of tone in both written and oral communication | Poor demonstration of communication and listening skills; limited use of appropriate language learned in the course; primarily uses victim language; does not understand the importance of tone in both written and oral communication | No indication of communication and listening skills; consistently uses inappropriate language and/or victim language; does not understand the importance of tone in both written and oral communication |
| **Quality of Work** | Consistently gives best effort and provides high quality work. Work indicates planning and effort and always follows instructions. | Generally, gives best effort; Consistently completes quality work that follows instructions. | Demonstrates minimal effort and limited planning; Work is sometimes incomplete or does not follow instructions. | Does not demonstrate any effort or planning. Work is regularly incomplete or does not follow instructions |
| **Participation/ Teamwork** | Self-confident, but not arrogant; accepts responsibility for personal choices and the effects on the group; is well-respected by classmates; actively participates in group activities | Generally, accepts responsibility for own choices and participates in group activities; demonstrates strong, interdependent relationships with other students; generally well-respected by classmates. | Rarely accepts responsibility for own choices or makes poor choices when working with others; has difficultly effectively communicating or working with classmates; rarely participates in group activities. | Does not accept responsibility for own choices and regularly makes poor choices when working with others. Refuses to participate in group activities |

*Indirect assessment:*

The Graduate Exit Survey will be administered to all graduate students. Questions are assessed on a 5-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the professional readiness competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Professional Readiness: ability to work well with others.

The Alumni Survey will be administered to all graduates and students that did not return to Virginia Western within one academic year. Questions are assessed on a 5-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the professional readiness competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Professional Readiness: ability to work well with others.

**Schedule:** Professional Readiness was assessed in Fall 2021 and Spring 2022 using the Professional Readiness Rubric. The indirect assessment via the Graduate Exit and Alumni Survey is conducted and reported annually. The Graduate Exit and Alumni Surveys are administered by the Institutional Effectiveness Office (IEO). Results from the embedded, course-level assessments were aggregated by IEO office. No assessments were administered during the summer semester.

**Communication of findings:** Reports for each competency assessed in the previous academic year will be created by IEO during the summer and presented to the Assessment Team for review and approval by September 15th the following fall. Data will be presented in a disaggregated form to allow for student achievement disparities to be identified by race, gender, age range, and modality. The approved reports are then disseminated to the Vice President for Academic and Workforce Solutions, the academic deans, and the program heads who are tasked with further dissemination of the reports to the appropriate faculty. A summary of the report is shared during Fall in-service. Reports will be publicly available in the general education section of the IE website.

**Use of findings:** The data will be analyzed by the Assessment Team who develops the action plan. Action plans for SLOs that have not met or partially met benchmarks will be developed and are implemented by faculty at the course-level and reassessed in the next cycle.

## **Quantitative Literacy**

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**Definition:** Quantitative Literacy is the ability to perform accurate calculations, interpret quantitative information, apply and analyze relevant numerical data, and use results to support conclusions. Degree-seeking students (AA, AS, AAS) will calculate, interpret, and use numerical and quantitative information in a variety of settings.

**Outcome(s):**

**Degree-seeking students (AA, AS, AAS)** **will be able to:**

**LO1:** Perform accurate calculations.

**LO2:** Interpret quantitative information.

**LO3:** Analyze relevant numerical data.

**LO4:** Use results to support conclusions.

**Goal(s):**

1. Students will have an average score of 3.00 or better when assessed via the quantitative literacy rubric. The maximum score is 4.00.
2. Graduates will have an average satisfaction score with their quantitative literacy education of 4.00 or better. The maximum score is 5.00.
3. Alumni will have an average satisfaction score with their quantitative literacy education of 4.00 or better. The maximum score is 5.00.

**Measures:**

*Direct assessments:*

Virginia Western uses an artifact-based approach for general education assessment. Fall and Spring, faculty identify courses that will submit artifacts to be assessed based on the competencies addressed that year. Faculty then submit the rubric for faculty-determined assignments in the identified class using Canvas and the Outcome Measures Feature. The Institutional Effectiveness Office has a target goal of 10% of associate degree seeking students will be assessed. The assignments are scored by the faculty using a four-point rubric (Excellent, Good, Acceptable, and Needs Improvement). For AY 2022-23, 716 artifacts were assessed for 616 unique students for the Quantitative Literacy General Education Assessment. This represents 13.9% of the target population, program placed students (n=4,446). These artifact-based assessments were course-embedded in the following classes:

|  |
| --- |
| * BIO 101 |
| * BIO 102 |
| * BIO 141 |
| * BIO 142 |
| * CHD 216 |
| * CHM 111 |
| * CHM 112 |
| * ECO 201 |
| * HIS 121 |
| * HIS 122 |
| * MTH 154 |
| * MTH 155 |
| * NSG 170 |
| * PHY 241 |
| * PHY 242 |
| * PTH 115 |
| * SDV 101 |

The rubric used as has been provided below:

**Quantitative Literacy Rubric**

**Revised January 2019**

Quantitative Reasoning: the ability to perform accurate calculations, interpret quantitative information, apply and analyze relevant numerical data, and use results to support conclusions. A person competent in quantitative literacy possesses the skills and knowledge necessary to apply the use of logic, numbers, and mathematics to deal effectively with common problems and issues. A student with strong quantitative literacy skills can perform accurate calculations, interpret quantitative information, apply and analyze relevant numerical data, and use results to support conclusions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Excellent-4** | **Good-3** | **Acceptable-2** | **Needs Improvement-1** |
| **Interpretation.** Can the student answer questions directly related to the information provided? Example – Look at a chart and give the correct temperature for a charted date. | Demonstrates a thorough understanding of the given information. Can correctly answer questions directly related to the data. | Demonstrates an understanding of the given information. Can answer questions directly related to the data, but with minor errors. | Demonstrates a limited understanding of the given information. Can answer questions directly related to the data, but with substantial errors. | Demonstrates very little if any understanding of the given information. |
| **Analysis.** Can the student use the information provided to draw conclusions about a related topic? Example – Use a graph of past data to make predictions about the future. | Uses the given information to make conclusions, with no errors. | Uses the given information to make conclusions, with minor errors. | Uses the given information to make conclusions, with substantial errors. | Fails to present a conclusion, or does so in a completely invalid manner. |
| **Problem Solving.** Can the student set up the problem and solve it correctly? | Correctly organizes and calculates a mathematical strategy for a given situation | Organizes and calculates a mathematical strategy for a given situation, with mistakes in organization **OR** calculation. | Organizes and calculates a mathematical strategy for a given situation, with mistakes in organization **AND** calculation. | Did not organize or calculate a mathematical strategy for a given situation, or did so in a completely invalid manner. |
| **Translate Information**. Can the student correctly translate information from the problem/experiment into mathematical symbols, graphs, or tables? | Takes information from the problem/experiment and correctly translates it into mathematical symbols, graphs and/or tables. | Takes information from the problem/experiment and translates it into mathematical symbols, graphs and/or tables, with minor errors. | Takes information from the problem/experiment and translates it into mathematical symbols, graphs and/or tables, with substantial errors. | Did not translate the information, or translated it in a completely invalid manner. |

*Indirect assessment:*

The Graduate Exit Survey will be administered to all graduate students. Questions are assessed on a 5-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the quantitative literacy competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Quantitative Literacy: ability to analyze relevant numerical data.

The Alumni Survey will be administered to all graduates and students that did not return to Virginia Western within one academic year. Questions are assessed on a 5-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the quantitative literacy competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Quantitative Literacy: ability to analyze relevant numerical data.

**Schedule:** Quantitative Literacy was assessed in Fall 2022 and Spring 2023 using the Quantitative Literacy Rubric. The indirect assessment via the Graduate Exit and Alumni Survey is conducted and reported annually. The Graduate Exit and Alumni Surveys are administered by the Institutional Effectiveness Office (IEO). Results from the embedded, course-level assessments were aggregated by IEO office. No assessments were administered during the summer semester.

**Communication of findings:** Reports for each competency assessed in the previous academic year will be created by IEO during the summer and presented to the Assessment Team for review and approval by September 15th the following fall. Data will be presented in a disaggregated form to allow for student achievement disparities to be identified by race, gender, age range, and modality. The approved reports are then disseminated to the Vice President for Academic and Workforce Solutions, the academic deans, and the program heads who are tasked with further dissemination of the reports to the appropriate faculty. A summary of the report is shared during Fall in-service. Reports will be publicly available in the general education section of the IE website.

**Use of findings:** The data will be analyzed by the Assessment Team who develops the action plan. Action plans for SLOs that have not met or partially met benchmarks will be developed and are implemented by faculty at the course-level and reassessed in the next cycle.

**Scientific Literacy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Definition:** Scientific Literacy is the ability to apply the scientific method and related concepts and principles to make informed decisions and engage with issues related to the natural, physical, and social world. Degree-seeking students (AA, AS, AAS) will recognize and know how to use the scientific method and will evaluate empirical information.

**Outcome(s): Degree-seeking students (AA, AS, AAS)** **will be able to:**

**LO1:** Formulate a hypothesis.

**LO2:** Collect data.

**LO3**: Analyze data.

**LO4**: Draw accurate conclusions based on data.

**Goal(s):**

1. Students will have an average score of 3.00 or better when assessed via the scientific literacy rubric. The maximum score is 4.00.
2. Graduates will have an average satisfaction score with their scientific literacy education of 3.00 or better. The maximum score is 4.00.
3. Alumni will have an average satisfaction score with their scientific literacy education of 4.00 or better. The maximum score is 5.00.

**Measures:**

*Direct assessments:*

Virginia Western uses an artifact-based approach for general education assessment. Fall and Spring, faculty identify courses that will submit artifacts to be assessed based on the competencies addressed that year. Faculty then submit the rubric for faculty-determined assignments in the identified class using Canvas and the Outcome Measures Feature. The Institutional Effectiveness Office has a target goal of 10% of program-placed students will be assessed. The assignments are scored by the faculty using a four-point rubric (Excellent, Good, Acceptable, and Needs Improvement). For AY 2023-24, 453 artifacts were assessed for 402 unique students for the Scientific Literacy General Education Assessment. This represents 8.7% of the target population, program placed students (n=4,600).

In AY 2023-24, artifacts were collected from the following 12 courses:

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| --- |
| * BIO 101 |
| * BIO 141 |
| * BIO 142 |
| * BIO 251 |
| * BIO 253 |
| * BIO 255 |
| * CHM 101 |
| * CHM 111 |
| * CHM 112 |
| * MTH 161 |
| * PHY 241 |
| * PHY 242 |

The rubric used as has been provided below:

**Scientific Literacy Rubric**

**Revised 3/13/19**

A person who is competent in scientific literacy has the ability to apply the scientific method and related concepts and principles to make informed decisions and engage with issues related to the natural, physical, and social world. Scientific literate individuals can recognize and know how to use the scientific method, and to evaluate empirical information.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Excellent-4** | **Good-3** | **Acceptable-2** | **Needs Improvement-1** |
| **Formulate a hypothesis** | Formulates a testable hypothesis related to the problem. | Hypothesis is established but is not testable OR is unrelated to the problem. | Hypothesis is established but is not testable AND is unrelated to the problem. | Hypothesis is missing. |
| **Collect data** | Relevant data is collected with few or no errors. | Relevant data is collected with minor errors. | Relevant data is collected with a significant number of errors. | No relevant data is collected. |
| **Analyze data** | Data is analyzed with few or no errors. | Data is analyzed with minor errors. | Data is analyzed with a significant number of errors. | Data is not analyzed. |
| **Draw accurate conclusions based on data** | Conclusion drawn fully supports the scientific argument. | Conclusion drawn partially supports the scientific argument. | Conclusion drawn does not support the scientific argument. | Conclusion is missing. |

*Indirect assessment:*

The Graduate Exit Survey will be administered to all graduate students. Questions are assessed on a 4-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the scientific literacy competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Scientific Literacy: Ability to evaluate information gathered through observation or experience.

The Alumni Survey will be administered to all graduates and students that did not return to Virginia Western within one academic year. Questions are assessed on a 5-point Likert scale ranging from “Very satisfied” to “Very dissatisfied.” Questions pertaining to the scientific literacy competency include:

How satisfied are you with your academic preparation in the following general education areas?

1. Scientific Literacy: Ability to evaluate information gathered through observation or experience.

**Schedule:** Scientific Literacy was assessed in Fall 2023 and Spring 2024 using the Scientific Literacy Rubric. The indirect assessment via the Graduate Exit and Alumni Survey is conducted and reported annually. The Graduate Exit and Alumni Surveys are administered by the Institutional Effectiveness Office (IEO). Results from the embedded, course-level assessments were aggregated by IEO office. No assessments were administered during the summer semester.

**Communication of findings:** Reports for each competency assessed in the previous academic year will be created by IEO during the summer and presented to the Assessment Team for review and approval by September 15th the following fall. Data will be presented in a disaggregated form to allow for student achievement disparities to be identified by race, gender, age range, and modality. The approved reports are then disseminated to the Vice President for Academic and Workforce Solutions, the academic deans, and the program heads who are tasked with further dissemination of the reports to the appropriate faculty. A summary of the report is shared during Fall in-service. Reports will be publicly available in the general education section of the IE website.

**Use of findings:** The data will be analyzed by the Assessment Team who develops the action plan. Action plans for SLOs that have not met or partially met benchmarks will be developed and are implemented by faculty at the course-level and reassessed in the next cycle.

## **Capacity Statement**

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VWCC has the capacity to conduct these competency assessments and analyze the results for reporting and to support decision-making. The annual Graduate Exit Survey has been administered for many years to collect self-assessments on dimensions of learning and currently assesses six general education competencies.

VWCC has experienced and highly qualified personnel in its institutional research and assessment functions. The College’s Assessment Committee meets monthly and has been involved in all aspects of developing this plan. Senior leaders have been involved in developing the plan and are very supportive of these new assessments to improve teaching and learning.

VWCC will examine competency results in terms of equity for low-income (Pell eligible), first generation, ESL, under-represented, adult learner, and minority students where possible, given response rates and the sampling frame. This is restricted to some extent by the number of artifacts scored with rubrics, by testing, and by student participation in documented activities. Equity reporting requires the collection of student identifiers to match with PeopleSoft Student Information System variables for the relevant student characteristics. VWCC routinely analyzes progression rates based on these kinds of risk factors.