**GEORGE MASON UNIVERSITY**
**MASON CORE ASSESSMENT RESULTS: CRITICAL THINKING**
**TRENDS 2010-2014**

## Critical Thinking Assessment Overview

The Mason Core (formerly General Education) program at George Mason University organizes courses of study into three main outcomes. *Foundation* courses build knowledge and skills to promote success in the major and in future pursuits; *Core* courses introduce students to a breadth of subject matter and intellectual traditions; and *Synthesis* courses encourage the integration of past learning and experiences, develop critical thinking skills, and prepare students for lifelong learning. Student learning outcomes for the Mason Core outcomes are created and assessed by faculty, primarily through the University Mason Core Committee. Results of assessment activities are reported to the faculty, the Mason community, and the State Council of Higher Education for Virginia (SCHEV).

George Mason University engages in direct review of student work to assess the demonstration of critical thinking skills for its undergraduates. Written work is sampled from all *synthesis* courses, in which the application of critical thinking skills is a principal learning outcome.[1]

### Faculty-Led Assessment

In spring 2010, a Critical Thinking Across the Curriculum (CTAC) faculty learning community was facilitated by the Center for Teaching Excellence to develop expectations for the instruction and assessment of critical thinking skills for Mason undergraduate students. The learning community comprised eight faculty members who regularly taught synthesis courses, and assessment professionals from the Office of Institutional Assessment.

The faculty learning community adopted the following definition of critical thinking:

> *Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion. The capacity to combine or synthesize existing ideas, images, or expertise in original ways; thinking innovatively; and intellectual risk taking – all components of critical thinking - are part of the development of critical thinking.*

The CTAC faculty adopted the *Development of Critical Thinking Rubric*, which they adapted from the AAC&U VALUE rubric for critical thinking[2]. The rubric articulates fundamental criteria for the development of critical thinking, with performance descriptors demonstrating progressively more sophisticated levels of development (see Appendix A). The rubric provides guidelines for faculty in the

[1] http://masoncore.gmu.edu/general-education-at-mason-2/synthesis/

[2] https://www.aacu.org/value/rubrics

design of learning activities and assignments to foster critical thinking skills for Mason students. The rubric is designed to be used across disciplines and for a diversity of written work.

## Data Collection and Review of Student Work

The *Development of Critical Thinking Rubric* has been used for three major assessments. In 2010, 2012, and 2014, written work samples were collected from synthesis courses taught in the spring semesters of each review year (see Appendix B: List of Courses and Sample Size). Synthesis course faculty were asked to identify an assignment used in the course that they believed best demonstrated students' critical thinking skills. Faculty were asked to provide the assignment prompt and three work samples for that assignment from a list of randomly selected students provided by OIA.

Reviews were conducted in the summer of each year by a team of Mason faculty peer reviewers. Reviewers were trained on how to use the rubric, and scores were standardized using a calibration/norming process. Each work sample was reviewed twice. Results were tested for interrater reliability; when there were discrepancies, a third review was conducted, and the discrepant rating was discarded. See Table 1 for work samples reviewed by year.

**Table 1.** Work Samples by Year

| | 2010 | 2012 | 2014 | Total |
|---|---|---|---|---|
| 300-level courses | 125 | 86 | 134 | **345** |
| 400-level courses | 178 | 186 | 235 | **599** |
| **Total # samples (n)** | **303** | **272** | **369** | **944** |

*Note*: In the results section, the unit of analysis (i.e., n) represents the number of reviews, not the count of student work samples.

Work samples were scored using the *Development of Critical Thinking Rubric*. Work samples were reviewed for each outcome [Explanation of issues; Evidence; Influence of context and assumptions; Student's position (perspective, thesis/ hypothesis); and Conclusions and related outcomes (implications and consequences)] using the following scale: "Novice," "Milestone: Emerging," "Milestone: Showing Strength," and "Expert/Advanced." An option for "Not Addressed or No Evidence" was added for the review to allow for samples in which reviewers could not find evidence of the outcome.

Reviewers' ratings were analyzed and reported by course level, as reviewers believed that the level of expectation should be differentiated for 300-level and 400-level courses. Reviewers expected that work samples from 300-level synthesis courses should generally demonstrate "Milestone: Emerging;" and samples from 400-level courses should generally demonstrate "Milestone: Showing Strength." Furthermore, results were analyzed and reported separately for individual work samples and group work samples, with concerns about the validity of comparing individual with group work samples. Group projects likely do not provide evidence of any one student's critical thinking skills, but rather of a combination of students' efforts. Scores reported for group work samples were generally higher than those for individual work samples.

## Results

### *Review of Individual Work Samples*

Table 2 presents the mean scores for each of the five critical thinking outcomes and compares the means for 300-level courses with 400-level courses by year. Overall, work samples were rated highest for "Explanation of Issues" and "Evidence," and lowest for "Conclusions and Related Outcomes." Overall, no significant differences were found between the two course levels, except for one outcome. In both 2010 and 2012, work samples in 300-level courses demonstrated "Evidence" at higher levels than samples in 400-level courses. When work samples were aggregated across all three assessment years, significant differences emerge by course level only in "Evidence" (see Table 3).

**Table 2.** Mean Rating Comparison for Five Critical Thinking Outcomes by Course Level and Year

| Critical Thinking Outcomes | 2010 | | 2012 | | 2014 | |
|---|---|---|---|---|---|---|
| | 300-Level | 400-Level | 300-Level | 400-Level | 300-Level | 400-Level |
| **Explanation of Issues** | 2.37 | 2.30 | 2.12 | 2.15 | 2.32 | 2.38 |
| **Evidence** | 2.24* | 1.88* | 2.13* | 1.73* | 2.10 | 2.19 |
| **Influence of Context and Assumptions** | 2.09 | 2.03 | 1.95 | 1.81 | 2.05 | 2.07 |
| **Student's Position (Perspective, Thesis/Hypothesis)** | 1.98 | 1.92 | 1.78 | 1.82 | 1.99 | 2.01 |
| **Conclusions and Related Outcomes** | 1.90 | 1.90 | 1.84 | 1.90 | 1.93 | 1.98 |

*Note.* Mean values calculated on a 4-point scale: 1=Novice, 2=Milestone: Emerging, 3=Milestone: Showing Strength, and 4= Expert/Advanced; "Not Addressed or No Evidence" was treated as missing and was not calculated in the mean scores.
* $p < .05$ t-test (2-tailed) indicates significant differences between course-level

**Table 3.** Mean Rating Comparison for Five Critical Thinking Outcomes by Course Level

| Critical Thinking Outcomes | 2010-2014 | | | |
|---|---|---|---|---|
| | 300-Level | N | 400-Level | N |
| **Explanation of Issues** | 2.29 | 318 | 2.28 | 449 |
| **Evidence** | 2.16* | 326 | 1.95* | 447 |
| **Influence of Context and Assumptions** | 2.04 | 321 | 1.97 | 450 |
| **Student's Position (Perspective, Thesis/Hypothesis)** | 1.93 | 323 | 1.92 | 450 |
| **Conclusions and Related Outcomes** | 1.89 | 319 | 1.93 | 455 |

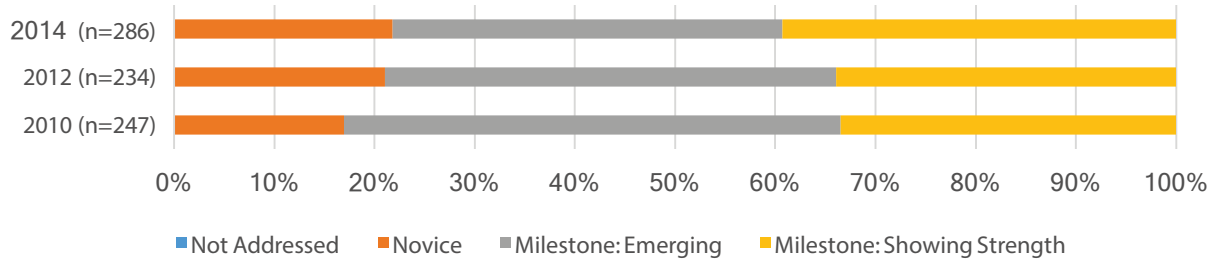
*Note.* Mean values calculated on a 4-point scale: 1=Novice, 2=Milestone: Emerging, 3=Milestone: Showing Strength, and 4= Expert/Advanced; "Not Addressed or No Evidence" was treated as missing and was not calculated in the mean scores.
* $p < .05$ t-test (2-tailed) indicates significant differences between course-level

It should be noted that while calculating mean scores allows for comparison of the two groups (300- and 400-level courses), this is not generally considered to be a reliable way to work with rubric data. Because the rubric is not based on an equalized scale, differences between performance indicators may not be even

(Novice to Emerging, for example). The nature of the data, therefore, produces discontinuous numbers that are better treated with nonparametric tests such as chi-square. Results are compared by year using this test in the next section.

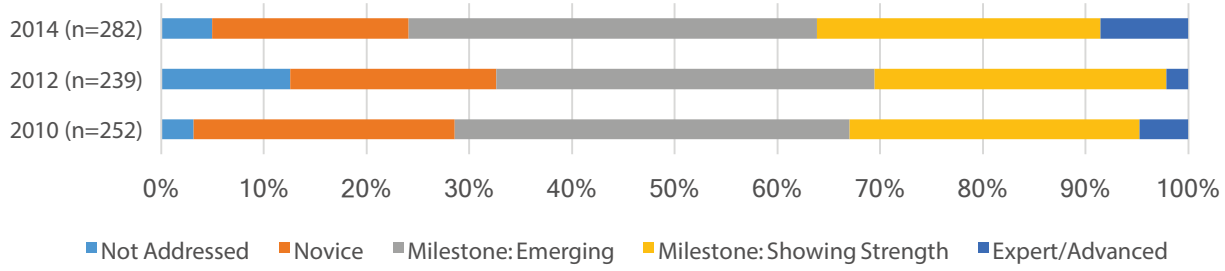
Figures 1-5 present the distribution of ratings for each critical thinking outcome by year. Chi-square tests were conducted to compare the distribution of ratings by year. Statistically significant difference was found by year in Explanation of Issues (Figure 1), Evidence (Figure 2), and Conclusions and Related Outcomes (Figure 5). Across all three assessments, student work has largely demonstrated competency at the Milestone levels—both Emerging and Showing Strength—for Explanation of Issues (74%) and Evidence (66%). Competency ratings were more dispersed for the other three outcomes, with student work more evenly rated across Novice, Emerging, and Showing Strength. It appears that student work was the least developed for Conclusions and Related Outcomes. Student work was least likely to demonstrate competency at the Expert/Advanced level, a finding that is consistent with results from a recent national study.[3]

**Figure 1.** Explanation of Issues*




* p < .05, chi-square test (2-tailed) indicate significant differences by year

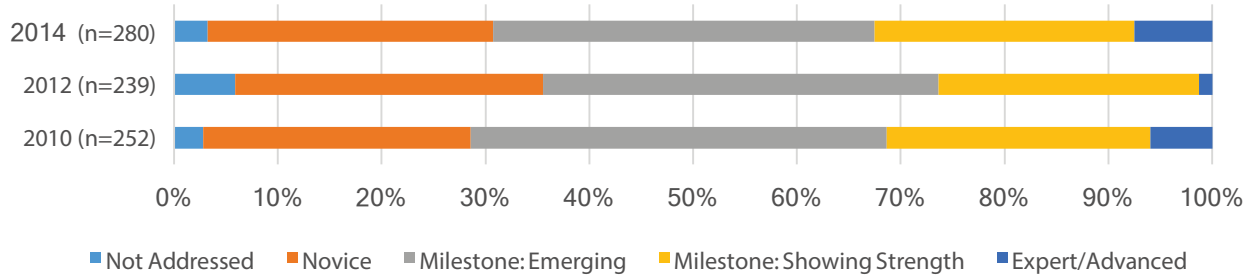
**Figure 2.** Evidence*




* p < .05, chi-square test (2-tailed) indicate significant differences by year

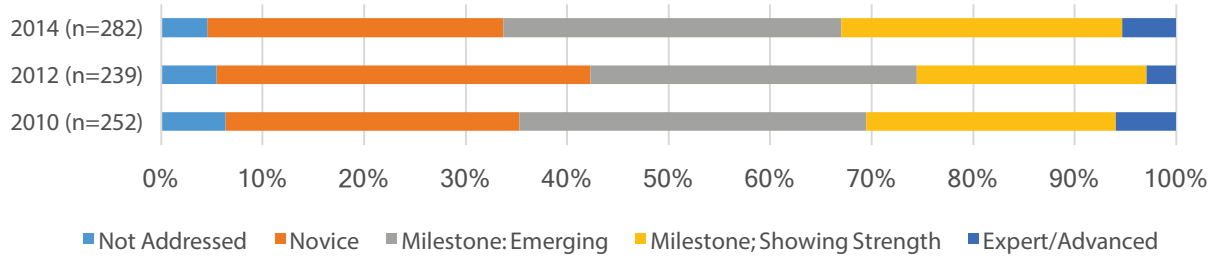
[3] Association of American Colleges and Universities. (2017). *On solid ground: VALUE report 2017*. Retrieved from https://www.aacu.org/publications-research/publications/solid-ground

**Figure 3.** Influence of Context and Assumptions



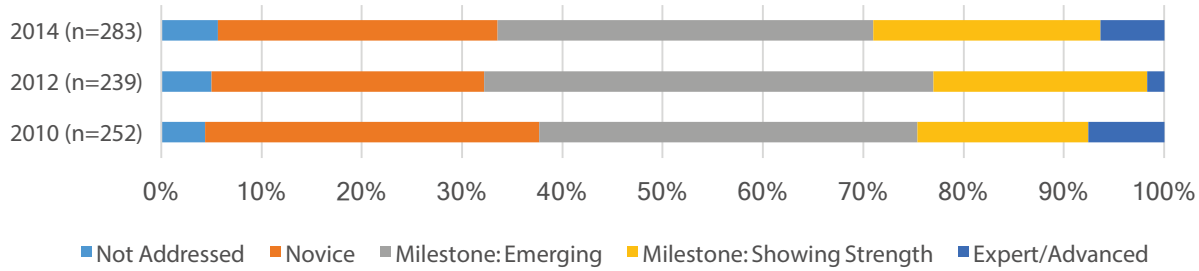

* p < .05, chi-square test (2-tailed) indicate NO significant differences by year

**Figure 4.** Student's Position




* p < .05, chi-square test (2-tailed) indicate significant NO differences by year

**Figure 5.** Conclusions and Related Outcomes*



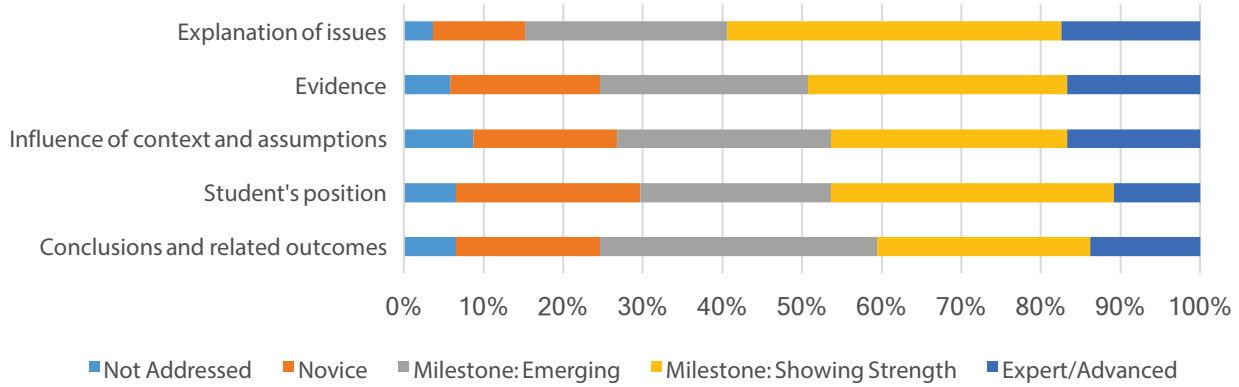

* p < .05, chi-square test (2-tailed) indicate significant differences by year

### *Review of Group Work Samples*

Synthesis courses in certain fields—particularly Business and Engineering—typically use a team-based approach to instruction. Students in these courses are expected to produce only team projects, so the work samples from these courses represent the collective work of three to six students. Grouping ratings of individual work with team projects would be misleading, and likewise, produce invalid comparisons, so assessment results of group samples are presented separately.

A total of 69 group work samples (138 reviews) were received and assessed over the three assessment years. These numbers were not sufficient to do an analysis by year, so ratings are presented in aggregate over the three assessment years. Figure 6 presents aggregate ratings for group work samples in all five critical thinking outcomes. Group work samples were largely rated as Milestone, trending toward Showing Strength. Group samples were most developed in Explanation of Issues, and least developed in Conclusions and Related Outcomes. For 4-7 percent of the samples, particular competencies were not addressed.

**Figure 6.** Rubric Ratings for Group Samples, 2010-2014




N=138

Because students in these courses are expected to demonstrate their learning through group projects, it is instructive to Mason's teaching and learning improvement efforts to understand how they demonstrate skills like critical thinking through their group work. However, it is important that these findings not be compared with those from the individual work samples. More work on assessing critical thinking competency through collaborative projects is warranted.

## Discussion and Observations

When discussing student learning, the question that is foremost on the minds of institutional leaders is, *how are our students doing?* The AAC&U VALUE Rubric initiative currently provides the best available tool for the direct assessment of student work, and the best opportunity to compare results within one institution and across institutions. The three assessments in this report provide substantial and reliable data to understand the demonstration of critical thinking skills across disciplines at Mason. These data can inform teaching and learning, and curricular initiatives at the program (in this case, Mason Core) and institutional levels.

It is important to understand that the VALUE Rubrics, including the Critical Thinking rubric on which Mason's *Development of Critical Thinking Rubric* was substantially based, are intended as developmental measures of student learning. By developmental, we mean that students grow and learn—often in uneven

ways—throughout their university education and beyond. It is not expected that all students start or end in the same place, nor is it expected that students will reach Expert/Advanced by degree completion. It is valuable to note that the results in this report are consistent with results at peer institutions that use the Critical Thinking VALUE rubric.[4] At the writing of this report, efforts are underway to establish a nationwide initiative to use the VALUE Rubrics for a massive direct assessment of student work. If the initiative is successful, we will be able to compare results across institutions and states, and hopefully, to understand on a large scale how student input variables can help us understand how students develop on each of the learning outcomes that the VALUE initiative addresses. This will likely take several years; however, preliminary results are promising.

*Data Issues and Limitations*

It is important to note the data issues and limitations to the results contained in this report. These limitations are related to the generalizability of the evidence for students' critical thinking skills.

First, scores provided in this report reflect student performance on one assignment, at one point in time. Critical thinking abilities are complex, situational, and continually developing. This report is useful in presenting a standardized assessment of student work on assignments across five domains of critical thinking; caution should be taken in interpreting these results as evidence of general or even situational critical thinking skills. Development of critical thinking skills is a process that cannot be sufficiently inferred from a single assignment. Also, it is important to acknowledge that all of the work used in these assessment is in written form. Other modes of demonstration (i.e. Oral, interpersonal) may be more illustrative of critical thinking ability, especially in particular disciplines or situations. Our reviewers often struggled with sorting out the critical thinking competency from the ability of the student to adequately express ideas through writing.

Second, assignments for each course were identified by the course instructor, so student performance was constrained by the requirements of the assignment. In 2010, faculty had not been previously exposed to the rubric, and thus, did not have opportunity to create course assignments or activities to specifically address the learning outcomes identified in the rubric. In 2012, many faculty had been introduced to the rubric and encouraged to use the outcomes to design assignments. By 2014, all *synthesis* faculty had been exposed to the rubric but were not required to design an assignment to address the rubric. The mismatch of assignment design to student product for the assessment may not have allowed a student to demonstrate critical thinking skills on all parts of the rubric; however, the substantial size of aggregated results does allow us to see patterns in student performance. In addition, we can interpret the findings to suggest that improved instruction is necessary in certain outcomes, specifically context and assumptions, taking position, and forming conclusions.

In consideration of the data limitations, it is essential that we understand the results in context with other institutions with similar student characteristics and academic programs. As the national initiative moves

[4] Association of American Colleges and Universities. (2017). *On solid ground: VALUE report 2017*. Retrieved from https://www.aacu.org/publications-research/publications/solid-ground

forward, we will be better able to understand Mason students' competencies and needs for development. However, faculty can use the results right now to focus on improving assignment and course design to emphasize the development of critical thinking in synthesis courses and throughout the curriculum. The *Development of Critical Thinking Rubric* is an important tool that can guide decisions about activities and assignments as well as classroom assessment instruction efforts. Faculty can use the tool at the individual, course, and program levels to understand more about their students' learning and design experiences to address their individual needs. Faculty should also adapt the tool to terms and processes used in their own disciplinary and interdisciplinary contexts.

**Post-Assessment Actions**

Faculty who participated in the assessment as synthesis course instructors or reviewers were invited to participate in a post-assessment workshop facilitated by the Center for Teaching and Faculty Excellence and Office of Institutional Assessment. The hands-on workshop focused on: enhancing course strategies for developing students as critical thinkers; generating strategies for integrating course goals with the broader goals of the Critical Thinking Across the Curriculum (CTAC) initiative through using the "Developing Critical Thinkers Rubric" as a tool; and revising a course assignment.

Through work with CTAC and the Mason Core Committee, the institution adopted The Mason Graduate as a set of institutional student outcomes. These outcomes integrate critical thinking into four major aspirational outcomes for the Mason Graduate: Critical and creative scholars; self-reflective learners; ethical, inquiry-based citizens; and thinkers and problem-solvers.[5] These outcomes now guide teaching and curricular initiatives, student learning outcomes, and funding priorities.

[5] http://masoncore.gmu.edu/

# Appendix A
## DEVELOPMENT OF CRITICAL THINKING RUBRIC

**Overview**

This rubric was adapted from the AAC&U VALUE rubric for critical thinking by an interdisciplinary team of faculty participating in a Critical Thinking Across the Curriculum [CTAC] faculty learning community. The rubric articulates fundamental criteria for the development of critical thinking, with performance descriptors demonstrating progressively more sophisticated levels of attainment. It provides a vision for the kinds of graduates we want to send into the world; that is, where we want students to be when they leave Mason.

The rubric's uses are twofold. First, it is intended as a framework for faculty to use as they reflect on strategies and assignments they implement to develop students as critical thinkers in their classrooms. Faculty might reflect on the opportunities to set students on this developmental trajectory and to show improvement in the development of critical thinking at course, program, or institutional levels. It provides a macro-level view of how students grow, progress, and/or evolve in the development of their critical thinking during their academic careers. Secondly, the rubric is intended for institutional-level use in evaluating and discussing student learning. It may also afford the opportunity to examine the development of critical thinking competencies within and/or across units.

Scholars in this outcome point to the key importance of dispositions, or habits of mind, in the development of students as critical thinkers. Thus, the rubric begins with the criterion, intellectual autonomy, *as a precondition* for the development of specific critical thinking competencies as articulated in the remainder of the rubric. The target, for those who teach critical thinking, is to talk with students about the dispositions or habits of mind of the critical thinker as the development of the cognitive skills proceeds and to encourage them to be reflective about themselves as critical thinkers.

**Framing Language**

This rubric is designed to be transdisciplinary, reflecting the recognition that success in all disciplines requires habits of inquiry and analysis that share common attributes. Further, research suggests that successful critical thinkers from all disciplines increasingly need to be able to apply those habits in various and changing situations encountered in all matters of personal and professional contexts, specifically, but not exclusively, the vocations, the professions, industry, and commerce.

**Assessment of Work Samples**

This rubric is designed for use with many different types of assignments and the suggestions here are not an exhaustive list of possibilities. The development of critical thinking can be demonstrated in assignments that require students to complete analyses of text, data, or issues. Research papers, lab reports, musical compositions, a mathematical equation that solves a problem, or a prototype design are all examples of work samples that could be assessed. Assignments that cut across presentation mode might be especially useful in some fields. If insight into the process components of critical thinking (e.g., how information sources were evaluated regardless of whether they were included in the product) is important, assignments focused on student reflection might be especially illuminating.

**Definition**: Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion. The capacity to combine or synthesize existing ideas, images, or expertise in original ways; thinking innovatively; and intellectual risk taking – all components of creative thinking – is part of the development of critical thinking.

NOTE: *Not all outcomes will be applicable to all teaching situations*.

# Appendix A
## DEVELOPMENT OF CRITICAL THINKING RUBRIC

**Developing the Critical Thinker**

This criterion is best thought of as a precondition for the development of specific critical thinking competencies as articulated in the remainder of this rubric.

| | Novice | Milestone: Emerging | Milestone: Showing Strength | Expert/ Advanced |
|---|---|---|---|---|
| **Intellectual Autonomy** | Typically, a dualistic view of the world (black/white, right/ wrong) and is dependent on authority. There is reluctance to examine counter-argument. Student has unrealistic view of self as well as unfocused concern with work organization, study skills, and intellectual habits of mind. | Students begin to recognize multiple perspectives and demonstrate courage as they begin to take risks with ideas. There is a developing determination to succeed and perseverance. Developing self-knowledge, e.g., the acceptance one might be wrong, seeking out knowledge, learning skepticism. Early awareness of study skills and organization weaknesses. | There is developing confidence in reasoning and argument where the student approaches knowledge questions analytically. Qualities include fair-mindedness and an opening up to others' viewpoints and arguments. Shows empathy with the situations of others (fellow-students, writers, artists). Developing definition of self as student through self-discipline (e.g.; punctual, taking pride in one's work, no procrastination). | Intellectual integrity is evidenced (e.g., search for counter-arguments, search for evidence); student grasps the contextual character of knowledge and that knowledge is constructed. Student demonstrates intellectual humility through realizing the evolving and temporary character of knowledge. There is realistic self-appraisal of one's strengths and limitations. |

# Appendix A
## DEVELOPMENT OF CRITICAL THINKING RUBRIC

| | Novice | Milestone: Emerging | Milestone: Showing Strength | Expert/ Advanced |
|---|---|---|---|---|
| **1. Explanation of issues** | Issue/problem to be considered critically is stated without clarification or description. | Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unstated. | Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions. | Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding. |
| **2. Evidence** *Selecting and using information to investigate a point of view or conclusion* | Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question. | Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little exploration. | Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are explored. | Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are explored in depth. |
| **3. Influence of context and assumptions** | Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position. | Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa). | Identifies and examines own and others' assumptions and several relevant contexts when presenting a position. | Systematically and methodically analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position. |
| **4. Student's position (perspective, thesis/ hypothesis)** | Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious. | Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue. | Specific position (perspective, thesis/ hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis). | Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis). |
| **5. Conclusions and related outcomes (implications and consequences)** | Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified. | Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly. | Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly. | Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order. |

## Appendix B: List of Synthesis Courses and Sample Size*

| Course | Course/Section Title | 2010 | 2012 | 2014 | Total |
|---|---|---|---|---|---|
| **ADJ 303** | Experiential Criminal Justice System | 12 | 0 | 0 | **12** |
| **ANTH 400** | Synthesis Seminar | 0 | 0 | 4 | **4** |
| **ARTH 394** | The Museum | 8 | 0 | 0 | **8** |
| **AVT 385** | EcoArt | 0 | 0 | 6 | **6** |
| **AVT 497** | Senior Project | 6 | 12 | 0 | **18** |
| **AVT 498** | Senior Design Project | 0 | 6 | 6 | **12** |
| **BENG 493** | Senior Adv Design Project II | 0 | 0 | 2 | **2** |
| **BIOL 301** | Biology and Society | 16 | 6 | 16 | **38** |
| **BIS 490** | RS: Bach Individual Study Project | 6 | 0 | 0 | **6** |
| **CEIE 490** | Senior Design Project | 6 | 2 | 0 | **8** |
| **COMM 326** | Rhetoric of Soc Mvmts/Pol Contr | 0 | 6 | 6 | **12** |
| **COMM 362** | Argument and Public Policy | 8 | 0 | 6 | **14** |
| **COMM 454** | Free Speech and Ethics | 8 | 0 | 0 | **8** |
| **CONF 490** | RS: Integration | 8 | 12 | 2 | **22** |
| **CONS 490** | Integrated Conservation Strategies | 0 | 0 | 6 | **6** |
| **CRIM 495** | RS: Caps in Crim, Law, Society | 0 | 12 | 10 | **22** |
| **CS 306** | Synt Ethics/Law for Comp Profe | 0 | 4 | 17 | **21** |
| **DANC 490** | Senior Dance Seminar | 6 | 6 | 0 | **12** |
| **ECON 309** | Econ Problems and Public Policies | 6 | 6 | 20 | **32** |
| **ENGH 305/ENGL 325** | Dimensions Writing and Lit | 25 | 18 | 13 | **56** |
| **EVPP 480** | Environmental Science & Policy | 0 | 0 | 6 | **6** |
| **FRLN 385** | Multilingualism, Identity/Power | 0 | 0 | 4 | **4** |
| **GAME 490** | Senior Project | 0 | 0 | 4 | **4** |
| **GCH 465 DL** | Community Health Capstone | 0 | 0 | 7 | **7** |
| **GEOG 303** | Conservation of Resources/Enviro | 8 | 0 | 0 | **8** |
| **GEOL 420** | Earth Science and Policy | 0 | 5 | 2 | **7** |
| **GOVT 490** | Synthesis Seminar | 16 | 21 | 16 | **53** |
| **HAP 465** | Integration Prof Skills/Issues | 0 | 6 | 4 | **10** |
| **HEAL 490** | Internship Community Health Ed | 2 | 0 | 0 | **2** |
| **HHS 465** | Exam/Integration Prof/Hlthcre Iss | 24 | 0 | 0 | **24** |
| **HIST 300** | Introduction Historical Method | 14 | 28 | 24 | **66** |
| **HIST 499** | RS: Senior Seminar in History | 24 | 18 | 11 | **53** |
| **IT 492** | Senior Design Project I | 14 | 0 | 15 | **29** |
| **MATH 400** | History of Mathematics | 8 | 6 | 6 | **20** |
| **NCLC 491** | Senior Capstone Experience | 0 | 6 | 0 | **6** |
| **NURS 465** | Exam/Integrtn Prof/Hlthcre Iss | 0 | 18 | 17 | **35** |
| **PHED 415** | Std Teach in Phys Education | 8 | 6 | 6 | **20** |
| **PHIL 309** | Bioethics | 16 | 12 | 4 | **32** |

| Course | Course/Section Title | 2010 | 2012 | 2014 | Total |
|---|---|---|---|---|---|
| **PHIL 378** | Reason, Sci, Faith in Modern Age | 6 | 0 | 0 | **6** |
| **PSYC 405** | Mystery, Madness, and Murder | 0 | 6 | 27 | **33** |
| **PSYC 406** | Mystery, Madness, and Murder | 0 | 0 | 6 | **6** |
| **PSYC 427** | Community Engagement | 0 | 0 | 6 | **6** |
| **RUSS 353** | Russian Civilization | 6 | 0 | 6 | **12** |
| **SOCI 483** | The Sociology of Higher Education | 0 | 0 | 6 | **6** |
| **SOCW 323** | Human Behavior/Life Course | 0 | 6 | 12 | **18** |
| **SOM 498** | Capstone Crs:Adv Bus Mod | 32 | 16 | 39 | **87** |
| **SPMT 490** | Internship | 2 | 8 | 4 | **14** |
| **SYST 495** | Senior Design Project II | 4 | 6 | 4 | **14** |
| **THR 440** | Adv Stud Dir/Dramaturgy | 0 | 4 | 0 | **4** |
| **THR 496** | Text in Production | 0 | 0 | 6 | **6** |
| **TOUR 490** | Internship in Tourism | 4 | 10 | 13 | **27** |
| **Total** | | **303** | **272** | **369** | **944** |

* Sample size refers to the number of work samples received and reviewed by the faculty review teams. A zero (0) means that the course was either not taught that semester, or the course was taught but no work samples were received. Courses may have been new or were discontinued during the review period.