# CREATIVE STUDIES DEPARTMENT

# GRADUATE PROGRAM ASSESSMENT

## Creative Studies Vision:

Igniting creativity around the world: Facilitating the recognition that creative thinking is an essential life skill.

## Creative Studies Mission:

The International Center for Studies in Creativity at Buffalo State credentials creativity through diverse programs that cultivate skills in creative thinking, innovative leadership practices and problem solving techniques. ICSC provides tools that enable individuals, worldwide, to develop their own and others' creativity to foster positive change.

## Approach to Assessment:

The Creative Studies faculty selected a well-known creativity model to guide their assessment efforts.  This model, developed by one of the department's founding faculty members Dr. Ruth Noller, highlights the interaction of a number of key variables that predict creative behavior over time.  Contemporary research by such luminary scholars as Teresa Amabile, Dean Simonton and Robert Sternberg has supported the importance of the elements in this model.  The model is as follows:

$$\text{Creative Behavior} = f_{\text{attitude}} \text{ (Knowledge, Imagination, Evaluation)}$$

This model suggests that creativity is a function of the interaction among three key elements: knowledge, imagination and evaluation.  Knowledge refers to a fundamental understanding of one's domain or the problem area under consideration.  Imagination relates to flexibility and originality in thinking, as well as how one approaches, as applied to a predicament or opportunity.  And evaluation relates to one's ability to select, refine and develop the ideas, solutions or thoughts that hold the greatest promise.  Finally, Noller noted that the individual's attitude, that is his or her motivation and open mindedness, is a key driving force in determining the extend to which he or she takes advantage of knowledge, imagination and evaluation.

ICSC Graduate Program Assessment Plan – Approved Spring 2011
Updated April 2016

The courses in the Master of Science degree program in Creative Studies are organized into three strands.  Upon reflection, the faculty agreed that these strands appear to focus on the fundamental elements in Noller's creativity model.  Although there is certainly much overlap, the nature and objectives of the courses in the respective strands do seem to highlight a particular element within the Noller model.

## Theory and Foundation Strand – Knowledge

## Creative Problem Solving Strand – Imagination

## Research, Dissemination & Development – Evaluation

With respect to the important element of attitude, it was the opinion of the faculty that the program as a whole should focus on developing a creative mindset among the students.  As Noller observed, attitude or motivation is a key factor in engaging one's knowledge, imagination, and evaluation skills in producing creative behavior.  Given the importance of attitude and motivation, the faculty believed that all courses should support and require students to develop a creative outlook.

**Phases of Assessment Plan:**

Overview
Using Noller's model, the Creative Studies Department will phase in an assessment program that progressively addresses the different elements of the model.  We will begin with the foundation element, attitude, then proceed to imagination, followed by knowledge and evaluation.

The pages that follow provide a detailed description of the specific student learning outcomes associated with the Master's Degree in Creative Studies, along with measures associated with these desired outcomes.  Many of these student learning outcomes, and their respective measure, are ongoing.

As indicated above, for purposes of the program assessment, the Creative Studies Department will highlight and test different elements of the Noller creativity model overtime.  So although many assessment procedures will remain ongoing, as they are a natural part of the curriculum, specific measures will be added or focused on to determine whether they curriculum significantly impacts the factors in

Noller's model. What follows is an ongoing update of the progressive phases of this assessment plan, i.e., descriptions of new phases as they are planned by the faculty and summative comments about phases that have been successfully concluded.

**<u>Phase 1 (Fall 2011 to Fall 2015)</u>**
The first phase of the Creative Studies Department assessment plan focused on the impact of the graduate curriculum on creative attitudes. To that end the department adopted a research-based measure of creative attitude, the Basadur Creative Attitude Index. Basadur's measure assesses two foundational attitudes to creative thinking: 1) preference for ideation; and 2) resistance to premature critical evaluation. A hallmark of the Creative Problem Solving process taught in the graduate curriculum is the ability to separate divergent from convergent thinking. With this goal in mind students are introduced to, and practice, a set of principles to guide and balance these two fundamental forms of thinking. With respect to divergent thinking, an ability to generate many, varied and original options, students are taught to suspend their judgment – the key principle to divergent thinking. The attitudes measured by Basadur's assessment tool closely align with this principle; therefore, we believe results on this measure will inform the department as to whether students have truly internalized this creative attitude. To that end, a pretest-posttest design using Basadur's measure was adopted. The pre-test of creative attitudes occurred at the beginning of the CRS 559 coruse, before any introduction was provided to creative thinking. The posttest, adminstiration a second version of the Basadur measure, occurred when students enrolled in the capstone  course to for the graduate certificate and Master of Science degree, i.e. CRS 635 "Seminar in Creativity and Change Leadership." The minimum time between these two courses is 9 months.

Results showed significant changes in both attitudes, that is an increase in the preference for ideation and a decrease in premature critical evaluation. For detailed results see a paper presented at an international creativity conference or a chapter publication in the Handbook of Research on Creative Problem-Solving Skill Development in Higher Education (citations provided below).

Puccio, G. J., Keller Mathers, S., Acar, S., & Acar Cayirdag, N. (in press). International Center for Studies in Creativity: Curricular Overview & Impact of Instruction on the Creative Problem-Solving Attitudes of Graduate Students. In C. Zhou (Ed.), Handbook of Research on Creative Problem-Solving Skill Development in Higher Education. Hershey, PA: IGI-Global.

Puccio, G. J., Keller-Mathers, S., Acar. S., & Cayirdag, N. (2014, October). The impact of long-term creativity study (training) on attitudes towards creativity. Paper presented at the First Annual International Creativity Collaborative: Creativity and Innovation in an Interdisciplinary and Multicultural World. University of Georgia Torrance Center, Athens, Georgia.

Phase 2.1 (Fall 2012 to Present)
As originally planned by the faculty, Phase 2 of the assessment planned focused on assessing the impact of graduate curriculum on imagination. To that end, this phase began by assessing the impact of the curriculum on the production of imaginative responses in a group context. Group context was selected as this would permit an examination of the use of creative problem solving in teams, a focus of the

CPS strand of courses, but would also allow an examination of leadership effectiveness. That is, leadership is often a strong predictor of team imagination and the case has been made that creative problem solving and facilitation are core leadership competencies.

Phase 2.1 featured a quasi-experimental design that compared levels of training in creative problem solving (no training, some training, and expert-level training) across different instructional sets (no instructions, traditional brainstorming, and brainstorming with criticism). Analysis of approximately 100 groups showed that divergent thinking significantly improved when comparing groups without training to those who received some training (defined as one graduate level course in CPS or an equivalent workshop). Further analysis revealed that the most creative solutions offered by the groups to a real-world challenge were found among those at the expert-level of training. Additional analysis showed that leadership effectiveness was significantly higher for those in the some and expert-level training groups when compared to the no training groups.

To further isolate the effects of the use of a deliberate creative process, that is the separation of divergent from convergent thinking, further no-training groups were added to the analysis. Specifically, where the prior no training groups (referred to above) were provided with a process to follow during their 50-minute problem-solving meeting (i.e., 20 minutes to diverge and 30 minutes to converge and select the two best solutions to a public transportation issue), the new set of no training groups were provided with the same 50-minute period but were not given a specific process to follow. Analysis showed that for groups that had no prior formal training in CPS, those that followed a deliberate process focused on separating divergent and convergent phases generated significantly more ideas and more original ideas.

At the time of this writing a manuscript is being prepared for publication.

## Phase 2.2 (Summer 2016 to Completion)

Since Phase 2.1 focused on imagination as assessed in a group context, Phase 2.2 is designed to focus on the impact of the graduate curriculum on an individual's imagination. However, as previous research has already established the benefits of creativity training on individuals' ability to engage in creative-thinking skills related to imagination, such as divergent thinking assessed through measures like the Torrance Tests of Creative Thinking (TTCT), we wish to broaden previous published research in two ways. First, to examine the impact of the graduate curriculum on divergent thinking, as measured by the TTCT (verbal), in relation to the personality profiles of our graduate students. This approach will allow the faculty to determine if divergent thinking is improved across all personality profiles or whether interaction effects exist (i.e., enabling faculty to explore the degree to which the curriculum favors particular personality profiles). Second, as openness to experience is linked to creative performance, we also with to explore the degree to which the graduate curriculum impacted this personality (affective) trait as measured by the Big Five factors. Typically personality is considered to be a stable trait; however, as the authors of Creative Leadership: Skills that Drive Change (2011) have argued, there are affective skills that support creative problem solving. As such, we might expect that the graduate experience could shift students' expression of openness to new experiences.

Similar to the research methodology used in Phase 1, we propose a pretest-posttest design, in which students complete the TTCT (verbal) and a measure of the Big Five Personality Factors at the beginning of their graduate studies (CRS 559), and then again during the capstone course (CRS 635). Data collected as part of the CRS 580 course will be used to examine changes in TTCT scores and Openness to Experience in light of various personality dimensions (e.g., MBTI, FourSight, etc).

**CREATIVE STUDIES MASTER OF SCIENCE IN CREATIVITY GRADUATE PROGRAM ASSESSMENT PLAN**

Department _____Creative Studies_____

| Student Learning Outcomes | Student Learning Goals/Objectives | Courses Resulting in Achievement of Goals/Objectives | Activities Resulting in Achievement of Goals/Objectives | Measures/Criteria/Rubrics of Student Achievement of Goals/Objectives (Indicator of Mastery) | Timetable |
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| **Theory and Foundations Strand (CRS 560, CRS 625, CRS 635)**<br><br>Students able to synthesize domain relevant knowledge | 1 Articulate the interrelated aspects among key definitions, principles and constructs in the discipline of creativity in a way that demonstrates mastery of both historical and contemporary creativity literature and resources | CRS 560<br>CRS 625 | CRS 560 - Exam<br>CRS 625 - Written Argument and/or oral debate evaluated through rubric<br>CRS 625 – Analysis of recent refereed journal publications | 560- classroom discussion & construction of timeline, exam<br>625- Debate Criteria<br>625 – Oral and written reports on current creativity research | Across all courses in the strand |
| | 2 Develop an informed philosophy of one's own view of creativity | CRS 635 | 635 - Philosophy paper evaluated through rubric | 635- Paper Rubric | At conclusion of courses in the Foundations strand |
| | 3 Describe a vivid image of themselves as future creative leaders in their personal and professional lives | CRS 635 | 635 - Philosophy paper and presentation evaluated through rubric | 635- Paper Rubric | At conclusion of courses in the Foundations strand (note: Also at presentation part of comprehensive exam) |
| | 4 Communicate a deep understanding of a creativity topic in an authoritative style (i.e., ability to articulate, guide, persuade, influence and hold their position based on | CRS 635 | 635 - Philosophy paper and presentation evaluated through rubric | 635- Paper Rubric | At conclusion of courses in the Foundations strand |

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| | a well-grounded and deep understanding of the domain of creativity). | | | | |
| **Research, Development and Dissemination Strand (CRS 580, CRS 690, CRS 795, Comp Exam)**<br><br>Rigorous application of evaluation skills towards the development of a scholarly product | 1. Distinguish good science from poor science in the field of creativity studies, for example students can distinguish among opinions, theories, empirically established fact and rigorous research studies. | CRS 580<br>CRS 795<br>Comp Exam | Critique of a scholarly article | Analysis of written paper per grading rubric | Across all courses in the strand |
| | | CRS 580 | Mid-term exam in CRS 580 | Objective examination | Prior to conclusion of CRS 580 |
| | | CRS 795 | Master's thesis proposal | Faculty mentor approval | Conclusion of 3-credit independent study |
| | 2. Synthesize literature in a manner that demonstrates that they can identify, comprehend, analyze and evaluate knowledge germane to their topic of interest. | CRS 580 | Critique of published creativity measure in CRS 580 | Analysis of written paper per grading rubric | CRS 580 |
| | | Comp Exam | Comp exam write-up | Committee approval per department criteria for written paper | Culminating graduate experience |
| | | CRS 795 | Master's thesis write-up | Per course/institution guidelines & Committee approval | Culminating graduate experience |
| | | CRS 690 | Master's project report | Per course/institution guidelines and advisor approval | Culminating graduate experience |

| | 3. Engage in problem finding that leads to the identification of a gap that is then addressed by the student in a novel way. | CRS 795 | CRS 795 concept paper | Committee approval of thesis concept paper | Conclusion of first 3-credits of thesis Project course |
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| | | CRS 690 | Master's project report | Per course/institution guidelines and advisor approval | Culminating graduate experience |
| | | | CRS 690 proposals | Instructor's approval of master's project proposal per guidelines | Culminating graduate experience |
| | | Comp Exam | Comp exam write-up | Committee approval per department criteria for written paper | Culminating graduate experience |
| | | | Comp exam write-up | Committee approval per department criteria for written paper and portfolio | |
| **Creative Problem Solving Strand of Course (CRS 559, CRS 610, CRS 670)** <br><br> Reflective practitioners and creative leaders who can apply creative process skills in | 1. Develop a knowledge base in Creative Problem Solving (CPS) | CRS 559 CRS 610 | Application of the Creative Problem Solving process to personal challenges as demonstrated in written work and development of facilitation skill set | Grade on application paper per grading rubric | Across all courses in the strand |

| personal and professional contexts | | CRS 559 CRS 610 | Written review of CPS literature | Instructor Evaluation | Across all courses in the strand |
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| | | CRS 559 | Final exam in CRS 559 | Objective Examination | By conclusion of CRS 559 |
| | 2. Develop and maintain an affirmative attitude toward change and novelty. | CRS 559 | Basadur's Attitudes Towards Divergent Thinking Measure | Paper and pencil self-report measure based on norms | Pre-test in CRS 559 with Post-test in CRS 670 or CRS 635 (Phase One of Assessment Plan, discontinued) |
| | 3. Develop and demonstrate their CPS facilitation skills and fundamental group process skills through applied experiences in leading small groups through the CPS process. | CRS 610 CRS 670 | In class practice of group facilitations and group exercises | Instructor observation and critique. | Across all courses in the strand |
| | | CRS 670 | Plan, conduct and reflect on Creative Problem Solving facilitation and training sessions both in and out of class. | Instructor critique and grade on reflection paper. | CRS 670 |
| | 4. Understand and apply the skills needed to facilitate, teach or lead with the CPS process in professional settings. | CRS 670 | Portfolio project | Instructor evaluation via grading rubric | Across 559 and 610, with a culminating product by end of CRS 670 |

| | | | Plan, conduct and reflect on Creative Problem Solving facilitation and training sessions in authentic, real-world, settings. | Instructor critique and grade on reflection paper. | CRS 670 |
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