STOCKTON UNIVERSITY

2020 Initiatives Proposal Form

Thank you for your interest in submitting a proposal to the 2020 Initiatives process.

Please complete this form, save it to your hard drive, and then email a copy to: 2020@stockton.edu. Please copy your Dean/Director on the email. You will then be contacted by the appropriate 2020 Initiative Team representative/LEGS facilitators.

Proposals will be evaluated based on general criteria including the following:

- University-wide impact
- Clearly addressing one of the four LEGS themes from the 2020 strategic plan
- Specific budget details provided
- Realistic outcomes identified
- Assessment measures specified

Please consider the following questions as helpful prompts:

University-wide Objective(s)

- Does your proposal clearly address an issue relevant to your selected "primary strategic (LEGS) theme"?
- What specifically do you wish to accomplish with your project?
- How will Stockton, as a whole, benefit?

Expected Results

- How will you know if your project is a success?
- What are your anticipated outcomes and specific measurements for success?
- Does your proposal clearly indicate the person(s) or department(s) that will assume responsibility for the various work tasks?
- What is your project's "finish line"?

General Application Information	
Your Name	Mariana Smith
Your Email	mariana.smith@stockton.edu
Title of Project	Art/Science collaborative symposium
Project Leader	Mariana Smith
LEGS Initiative Team Coach	Jed Morfit
Project Partner(s)	
Duration / Time Frame of Project	Dec 2019-March 2020

Proposal Category (choose one: one-time or ongoing)			
One-Time Event or Activity		**Ongoing Event or Activity**	
☐	(A) $5,000 or less	☐	(C) $5,000 or less
✔	(B) More than $5,000	☐	(D) More than $5,000

Strategic Theme (choose one)	
✔	**Learning**
	Engagement
	Global Perspectives
	Sustainability

Strategic Objectives: choose one primary (P) in main theme and up to three secondary (S) In any themes			
Learning			
P	Deliver high value-added learning experiences and promote scholarly activity (S1)	-	Reward scholarly applications (ER2)
S	Promote liberal arts ideal to develop lifelong learners (S2)	-	Establish additional revenue sources (RS1-L)
-	Strengthen internal processes to support learning (IP1-L)	-	Reduce expenses (RS2-L)
-	Develop faculty and staff skills to support learning (ER1-L)	-	Align resources to support strategic plan (RS3-L)
Engagement			
-	Establish Stockton as an integral part of the identity of students, faculty, staff, alumni, and community members (S3)	P	Foster an interactive environment among students, faculty, staff, and community (ER3)
-	Prepare students for active citizenship role (S4)	-	Increase opportunities for interactions between internal and external communities (ER4)
-	Create mutually reinforcing intellectual and co-curricular experiences (S5)	-	Establish additional revenue sources (RS1-E)
-	Strengthen internal processes to support engagement (IP1-E)	-	Reduce expenses (RS2-E)
-	Develop faculty and staff skills to support engagement (ER1-E)	-	Align resources to support the strategic plan (RS3-E)
Global Perspectives			
-	Develop a globally diverse Stockton community (S6)	-	Strengthen opportunities for global interaction among members of the Stockton community (ER5)
-	Enhance capacity to participate globally (S7)	-	Establish additional revenue sources (RS1-G)
-	Strengthen internal processes to support global education (IP1-G)	-	Reduce expenses (RS2-G)
-	Integrate global program efforts among multiple units of the university (IP2)	-	Align resources to support the strategic plan (RS3-G)
-	Develop faculty and staff skills to support global education (ER1-G)		
Sustainability			
-	Increase sustainable infrastructure (S8)	-	Develop and implement sustainability programs (IP5)
-	Enhance sustainability education and research (S9)	-	Develop faculty and staff skills to support sustainability (ER1-S)
-	Increase recognition as a model of sustainability (S10)	-	Reward sustainable practices (ER6)
-	Partner to promote global sustainability (S11)	-	Establish additional revenue sources (RS1-S)
-	Strengthen internal process to support sustainability (IP1-S)	-	Reduce expenses (RS2-S)
-	Prioritize sustainability in plan operations and residential life (IP3)	-	Align resources to support the strategic plan (RS3-S)
S	Promote sustainability across the curriculum (IP4)	-	Seek efficiencies through sustainable practices (RS4)

The tables below allow for summaries of about 350 words. Additional information can be included as an attachment.

Narrative Summary of Project

If we consider that science and art are human attempts to understand the world around us, then even if the subjects and methods have different traditions, we could see their motivations and goals as fundamentally the same. Art/science collaborations then, become critically important as the shared root of both fields and are supported by the growing initiatives in the USA and abroad.

2020 Grant will expand the SP20 Stockton Gallery art/science art exhibition theme and a single artist lecture to add a 3-day symposium that includes additional scientists' and artists' presentations, an interdisciplinary round table discussion for students, faculty, and presenters, visiting artist lecture specifically for the NAMS audience, and students' previous art/science collaborative projects poster presentations. This will connect Stockton STEAM initiatives and the State of NJ's strategic plan for higher education objective #3 "Fostering research-creation" (see supplemental project narrative).

Assessment Plan: What are your anticipated outcomes and specific measurements for success?

GOALS
Highlight the past and ongoing STEAM collaborative projects at Stockton University.
Highlight the Stockton research and creative spaces with potential for the student interdisciplinary project building.
Make students aware of research-creation strategies in art/science crossovers.
Engage students in the scholarly discussions about the research strategies and funding opportunities in their respective fields.
Create unique displays that connect the academic spaces in Stockton Gallery, ARTV, and NAMS.
Engaging the student clubs connected to the arts and natural sciences, facilitate student-centric creative spaces that can function as as idea incubators.

The success of the project will be assessed based on the student interest and engagement with the events as well as incubation of the new collaborative initiatives

(for detailed assessment plan, please see supplemental project narrative).

Budget Summary – 2020 Requested Funding Only

	Item	FY2020 July 1, 2019 – June 30, 2020	FY2021 July 1, 2020 – June 30, 2021	Notes/Comments (stipends, supplies, hospitality, etc.)
1.	Five (5) presenters (see supplemental document)	$ 7,100.00		salary exependitures
2.	four (4) presenters (see supplemental document)	$ 3,800.00		lodging and travel expenses
3.	Catering (see supplemental document)	$ 2,200.00		round table event and visiting lecturers presentations
4.	Promotional materials (see supplemental document)	$ 1,000.00		presenters' announcements and posters, students' poster presentations
5.				
6.				
7.				
	Total	$ 14,100.00	$ 0.00	

* Please note: a proposal can only receive 2020 funding for two fiscal years.

Funding Questions

Are you receiving any other University funding for this project?	no	
What department or academic school will your budget for this project reside?	ARHU	
Who will be the Budget Unit Manager (BUM)?	Madeline Perez, Denise McGarvey	
Who will be the budget processor?		
If you are requesting 2020 funding to hire a TES or consultant, is that person a current Stockton employee?	**Yes, Currently Paid as a/an:** ○ **Adjunct** ○ **Faculty** ○ **Staff** ○ **TES**	◉ **No**
Will you need 2020 funds for immediate use to begin your project?	◉ **Yes, Date Needed:** 12/20/2019	○ **No**

Additional Support Questions

Will your project require support from Information Technology Services?	◉ **Yes**	○ **No**
If so, please provide details:	facilitate lecture, photo and video documentation of the events, interviews	
Will your project require support from Plant/Facilities & Operations?	◉ **Yes**	○ **No**
If so, please provide details:	Support to facilitate events and lectures with the room set up	

Supervisor Approval/Support

Have you discussed your 2020 proposal with your supervisor, director, and/or dean and received their support?	Yes

* Please note: proposers who answer "no" to this question may be required to submit additional documentation in support of their 2020 application form.

CC: Dean/Director/Supervisor

JOHN SABRAW

Stipend	$2500.00
Lodging and travel	$1200.00

1. **Lecture ARTV** **Feb 18, 2020**
   - 2h lecture + prep

2. **Lecture NAMS** **Feb 20, 2020**
   - 2h lecture + prep
   - develop supplemental materials for NAMS display
     - 3D printed scaled filtration model
     - Poster and materials (sludge, pigments, paint samples, etc.)
     - Video presentation to accommodate the display

3. **Round table discussion** **Feb 20, 2020**
   - 1h round table discussion with students
   - Prep the informal presentation: working with the participating faculty group, prepare thematic materials, handouts, and questionnaires for the round table (zoom meetings and face to face meetings)

4. **Studio visits** **Feb 18, 2020**
   - 1-2h visit to the ARTV studios and review portfolios

Additional contributions

John Sabraw will pack and drive his artworks to the Stockton Gallery in December 2019, thus greatly reducing the cost of the shipment (approximately $2000.00 cost reduction considering the 3d printed model). Proposed lodging budget accommodates his stay in NJ but does not account for meals.

GAYLORD SCHANILEC

Stipend	$1500.00
Lodging and travel	$1000.00

1. **Lecture ARTV** **Feb 19, 2020**
   - 2h lecture + prep

2. **Round table discussion** **Feb 20, 2020**
   - 1h round table discussion with students
   - Prep the informal presentation: working with the participating faculty group, prepare thematic materials, handouts, and questionnaires for the round table (zoom meetings and face to face meetings)

3. **Studio visits** **Feb 19, 2020**
   - 1-2h visit to the ARTV studios and review portfolios

Additional contributions

Gaylord Schanilec had will pack artworks and deliver the to them to the University of Minnesota to be shipped together, thus reducing the cost (approximately $1500.00). Proposed lodging budget accommodates his stay in NJ but does not account for meals.

MATTHEW T. MCLAUGHLIN
Stipend $1000.00
Travel and lodging $900.00

1. **Lecture ARTV** **Feb 19, 2020**
   - 2h lecture + prep

2. **Round table discussion** **Feb 20, 2020**
   - 1h round table discussion with students
   - Prep the informal presentation: working with the participating faculty group, prepare thematic materials, handouts, and questionnaires for the round table (zoom meetings and face to face meetings)

3. **Studio visits** **Feb 20, 2020**
   - 1-2h visit to the ARTV studios and review portfolios

PHYLLIS AND VICTOR MERRIAM
Stipend $ 800.00

1. **Round table discussion** **Feb 20, 2020**
   - 1h round table discussion with students
   - Prep the informal presentation: working with the participating faculty group, prepare thematic materials, handouts, and questionnaires for the round table (zoom meetings and face to face meetings)

Additional contributions
Lodging and travel expenses are waved as an in-kind donation
Printmaking department provides additional $100 towards the stipend

KIM LANDSBERGERN
Stipend $ 800.00
Travel and lodging $ 900.00

1. **Round table discussion** **Feb 20, 2020**
   - 1h round table discussion with students
   - Prep the informal presentation: working with the participating faculty group, prepare thematic materials, handouts, and questionnaires for the round table (zoom meetings and face to face meetings)

CATERING $2300.00
Feb 19 Round table discussion $ 1100.00 (anticipated 10 presenters and 60 students and faculty)
Soup, Salad and Sandwiches **$13.99** per person
Accompanied with fresh baked cookies and cold beverages.
Feb 17, 18, 20 lectures at $ 400.00 per event

INTRODUCTION

If we consider that both science and art are human attempts to understand and describe the world around us, then even if the subjects and methods have different traditions, and the intended audiences are different, we can see their motivations and goals as fundamentally the same. Art/science collaborations then become critically important as the shared root of both fields. This assumption is supported by the growing federal, institutional, and academic support of such initiatives in the USA and abroad. (see “Selected Examples of Art Science in Higher Ed” supplemental document)

Looking to reflect these developments in the visual art as a discipline, in SP20, ARTV program and the Stockton University Gallery developed a group exhibition of three (3) artists who use scientific research methodology in their studio practice while maintaining ongoing collaborations with scientists and engineers to address such concerns as sustainability, pollution, and research-creation based solutions for academia and beyond.

This 2020 Grant proposal support will facilitate expansion of the current scheduled limited visual art programming: art exhibition and one (1) visiting artist lecture (ARTV students target audience), to become a broader Art/Science cross-disciplinary 3-day symposium program that includes: presentations from three (3) additional visiting scientists and two (2) additional artists, an interdisciplinary student and visiting presenter round table discussions (and food) and a visiting artist lecture addressing the engineering and scientific methodology formatted specifically for the NAMS audience. Additional programming will include ARTV studio visits form the artists and scholars and student presentations of the previous Stockton interdisciplinary curricular initiatives.

By bringing together visiting artists, NAMS and ARHU faculty, and interdisciplinary student cohort, this symposium will not only generate dialogue across the visual art and natural science disciplines, it will create opportunities for creative collaboration idea incubation. This will not only connect with the Stockton STEAM interdisciplinarity initiatives, but also address the State of NJ’s strategic plan for higher education objective #3 "Fostering research-creation.”

SYMPOSIUM ACTIVITIES AND SCHEDULE

The SP20 Stockton Gallery exhibition will present a TED fellow, Ohio University professor John Sabraw, a renowned master printer and book artist Gaylord Schanilec, New York-based artists with the scientific background in computer science and data analysis—Phyllis and Victor Merriam, as well as an artist, printmaker, and curator Matthew T McLaughlin who frequently engage natural sciences in their artistic production.

Using the Stockton Gallery exhibition as a central nexus for the discussions and presentations, with the 2020 Grant support for the stipend, travel, and lodging, the proposed symposium will unfold as a number of events between Feb 17 and Feb 20. These will include artist lectures and a round table discussion held in the Stockton Art Gallery. John Sabraw presentation to the NAMS audience in the Unified Science building. Additional student presentations (posters and student club events) will be organized in conjunction with the lectures to increase the effectiveness of student participation.

The proposed program will highlight academic spaces and curricular initiatives; therefore, the strategic theme aligns best with Learning, however the subject matter and scholarship will highlight research and creative initiatives related to Sustainability theme as well. All of the invited presenters emphasize teaching in their practice and a special effort will be made to engage students beyond the lecture format. Given that the proposed programming is intended to explore and foster interdisciplinary collaboration between artists and scientists around issues of sustainability it clearly aligns with the Strategic Themes of Learning and Sustainability.

Campus-wide impact
When expanded beyond the visual arts gallery space, this series of lectures and activities will highlight the Stockton STEAM collaborative practices and emphasize the existing learning initiatives, as well as create a space for students to present their work and engage with practitioners in the field. Additionally, such programs could function as incubators for the future course-related collaborations and will undoubtedly lead to more compelling project development and learning opportunities. (see "Research- Creation Objectives" supplemental document)

SCHEDULE
Artist lectures (visual art addressing how scientific methodology factors into creative process, for the detailed artist bio and images, see attached "Artist Information" supplemental document)
Strategic Objectives: Deliver high value-added learning experiences and promote scholarly activity (S1), Promote liberal arts ideal to develop lifelong learners (S2)

Feb 18 **John Sabraw, Professor, Chair of Painting Department, Ohio University**
Location: Stockton Gallery
Catering: Light refreshments
Presents paintings and mixed media works. The main focus of his research currently is working with a team of engineers and watershed experts to remediate streams polluted by acid mine drainage from Ohio abandoned coal mines.

Feb 19 **Gaylord Schanilec, freelance artist (2020 Grant)**
Location: Stockton Gallery
Catering: Light refreshments
Master printer and wood engraver. Presents Lac des Pleurs—a study of the 22-mile length of the upper Mississippi River known as Lake Pepin. The University of Minnesota Special Collections lent the artist books as well as printing blocks formed from the natural materials collected along the river bank.

Feb 19 **Matthew T. McLaughlin, Instructor, University of Maryland (2020 Grant)**
Location: Stockton Gallery
Catering: Light refreshments
Artist and curator who established R&D editions creating limited edition prints with artists, scientists and engineers. Each print is a collaboration between the printer and the invitee who go through steps in conducting experiments and attempting to prove or disprove a hypothesis on a concept related to his or her work.

Round table discussion (2020 Grant)
(please see "Round Table Supplemental" document)
This event is designed to foster an interactive environment among students, faculty, staff, and community (ER3), Deliver high value-added learning experiences and promote scholarly activity (S1), Promote liberal arts ideal to develop lifelong learners (S2), Promote sustainability across the curriculum (IP4)

Addressing the interdisciplinary methods, successful collaborative strategies, funding opportunities in the field, scholars will break out into table discussions organized by themes to facilitate informal conversations with students.

Feb 20 **Round table discussion (2020 Grant)**
Location: Stockton Gallery
Catering: buffet-style hot lunch and non-alcoholic drinks

Round-table Presentations Strategic Objectives:
Three (3) tables where an artist and scientist will hold an informal presentation and talk to students about such topics as art in the science and examples of art activism to support science as well as funding. Because the artists' lectures will be presented on Feb 17 and 19th the conversation can move towards the brainstorming incubators. The center stage introductions (10min) will be followed up by the topic-based round tables where students can interact with the scholars and artists on a more informal bases and where scholars can share their ideas and projects, while modeling for the students how the creative ideas become a project incubator through the discussions.

Round table breakdown and projected topics for discussions

1. **Natural science and history reflected in art**
   - **Michael McGarvey**
     Stockton University, graphic design
   - **Gaylord Schanilec**
     visiting artist (2020 Grant)
   - **Dr. Mark Demitroff**
     Stockton University and South jersey Culture and History Center

2. **Sustainability and research-creation**
   - **Dr. Anna Pfeiffer-Herbert**
     Stockton University Marine Science
   - **John Sabraw**
     Ohio University, visiting artist (2020 Grant)
   - **Dr. Kim Landsbergern**
     Antioch University, Natural Science (2020 Grant)

3. **New technology and contemporary art applications in academia and research**
   - **Dr. Phyllis and Dr. Victor Merriam**
     visiting artists, computer science (2020 Grant)
   - **Matthew T. McLaughlin**
     visiting artist, Instructor, University of Maryland (2020 Grant)
   - **Jed Morfitt**
     Stockton University visual art

Additional participation from the Stockton faculty is pending and will depend on the grant availability.

Feb 20 **John Sabraw, NAMS lecture (2020 Grant)**
Location: Stockton Unified Science Center
Catering: Light refreshments
Strategic Objectives: Foster an interactive environment among students, faculty, staff, and community (ER3), Promote sustainability across the curriculum (IP4)

With the 2020 grant support, to further elaborate on the scientific methodology and sustainability work with Dr. Guy Riefler, a Professor of civil engineering at Ohio University, John Sabraw will bring the scaled model, pigments and paint samples, and the supporting video to create a display in the NAMS space.

Feb 18-20 **Matthew T. McLaughlin and John Sabraw** visit studios and review portfolios (2020 Grant)
Strategic Objectives: Foster an interactive environment among students, faculty, staff, and community (ER3), Promote liberal arts ideal to develop lifelong learners (S2).

Feb 18-20 **Student poster presentations (2020 Grant)**
- ARTV works developed in the NAMS spaces
- 3D printing workshop
- Examples of the art/science projects developed for the Atlantic City Coast Day
- Student Clubs in visual arts and natural sciences

OBJECTIVES AND OUTCOMES
2020 Strategic Objectives:
- Foster an interactive environment among students, faculty, staff, and community (ER3),
- Deliver high value-added learning experiences and promote scholarly activity (S1),
- Promote liberal arts ideal to develop lifelong learners (S2),
- Promote sustainability across the curriculum (IP4)

Symposium Objectives
- Increase awareness of art/science innovative practices and research-creation strategies
- Highlight Stockton University research and creative spaces
- Explore potential for the curricular interdisciplinary project building

Outcomes
- Events will highlight the past and ongoing STEAM collaborative projects at Stockton University
- Events and lectures will increase students' awareness about research-creation strategies
- Events and lectures will increase students' engagement in the scholarly discussions about the interdisciplinary research strategies and funding opportunities in their respective fields
- Unique displays will connect the academic spaces in Stockton Gallery, ARTV, and NAMS
- Student clubs connected to the arts and natural sciences will present their programming
- Events and lectures will consider interdisciplinary academic spaces as student-centric spaces for the idea incubation
- Events and lectures will lay groundwork for the future curricular collaboration projects

ASSESSMENT
Assessment will be centered around three main objectives:
- to evaluate student interest and engagement with the symposium programming addressing art and science crossover themes
- to evaluate student awareness of and engagement with the Stockton University academic spaces and university opportunities
- to evaluate the effectiveness of the programming in engaging the students and faculty

During the events assessment will be conducted using the following tools:
- Attendance sheets (administered by Stockton Gallery student workers)
- Card swipes (administered by Stockton Gallery student workers)
- Surveys and questionnaires administered at the events (administered by Stockton Gallery student workers, project student assistant (2020 grant) and round table participants)

- Round table discussion worksheets and notes (administered by round table participants and a student assistant (2020 grant) who will take notes during the discussions)
- Informal visual art critique feedback (administered by visiting artists to the critique participants)
- Social media assessment ("followers" and "likes") (administered by Stockton Gallery student workers)

After the symposium, additional assessment and feedback data

- Follow up meeting of the participating Stockton faculty and Denise McGarvey the Stockton Art Gallery Director. This meeting will be dedicated to a self-reflective analysis of the events structure and scheduling, the observations of the student engagement, as well the Stockton faculty interest in the future collaborations. Zoom meeting with visiting artists and scientists will be considered.
- Additional Qualtrics survey will be developed by Mariana Smith, Assistant professor of Visual Art and Zornitsa Kalibatseva, Assistant Professor of Psychology to be administered to the participating students and faculty members. These follow-up surveys will provide the student feedback to be compared and contrasted with the faculty meeting observations.
- The symposium will conclude on Feb 20th, however the projects conceived and "incubated" can potentially extend beyond the spring 2020 semester. The Stockton Day of Scholarship will be an additional platform to distribute the data analysis and student poster presentations.

The success of the project will be assessed based on the student interest and engagement with the events as well as incubation of the new collaborative initiatives:

- Attendance numbers and discipline breakdown
- Participants' responses to the Round Table Discussion worksheets
- Scope and originality of ideas brainstormed at the round table discussion
- Number of new Stockton faculty collaborative curricular initiatives with the intent for the possible implementation
- Number of Student Club projects
- Student presentations at the Day of Scholarship

Additional potential for the data analysis and collaboration with the SOBL faculty will be explored.

BACKGROUND

The proposal draws on the ongoing Stockton University STEAM-based collaborative projects, which have enjoyed demonstrable student interest and consistent administrative support. This project proposal was particularly inspired by a research-centered faculty collaboration between Anna Pfeiffer-Herbert, Assistant Professor of Marine Science Stockton and Mariana Smith, Assistant Professor of Visual Arts.

Selected Stockton projects examples (will be highlighted with the poster presentations)
2017-2019 Spring

ARTV 2155 Intermediate Drawing course students sketched the bone specimens and the plants in the NAMS greenhouse spaces. Based on this experience, ARTV4800 Botanical Observation course was developed to support senior student's painting in the new Greenhouse space.

Spring 2019

ARTV 2169 Printmaking and Mixed Media students participated in a printmaking workshop sponsored by ARHU, Visual Arts Program, and NAMS. Anna Pfeiffer-Herbert, Assistant Professor of Marine Science Stockton and Mariana Smith, Assistant professor of Visual Arts developed a

collaborative STEAM workshop where Printmaking class, Oceanographic Methods class, and Underwater Robotics class met at the Marine Field Station in the Port Republic to sketch and photograph on location. Working with the Stockton Sustainability Lab, students used 3D printers to translate the Marine Station images into the SLR files to be printed using the fused filament fabrication. Phyllis and Victor Merriam conducted 3- weeks workshop and guided students through software integration and printing in the ARTV printmaking studio.

Spring 2016
"The Sustainable Object/Sustainable Environment," an interdisciplinary arts and science course taught by Associate Professor of Biology Ron Hutchison and Visual Arts Instructor Elizabeth Hall. They developed and co-taught the class and exhibited the designs at the Atlantic city "Noyes Arts Garage" gallery. The students' designs were responses to The Cradle to Cradle Certified™ (C2C) framework for quality assessment of sustainable materials outlined in the book by William McDonough and Michael Braungart "Cradle to Cradle: Remaking the Way We Make Things." The C2C product standard guides designers and manufacturers through a continual improvement process that looks at a product through five quality categories –material health, material reutilization, renewable energy and carbon management, water stewardship, and social fairness. "The goal is for students to create functional 'sustainable objects' out of renewable, environmentally friendly materials that leave the smallest possible ecological footprint."
Some of the sustainable objects on display were a full-sized hollow surfboard; a collection of garments made from recyclable Tyvek house wrap; plant-based, leather-like fabric grown from cultures of yeast and bacteria; and a tent constructed from re-purposed T-shirts, locally harvested bamboo and varnish. This project is made possible by the Office of Service-Learning and Visual Arts Department in the School of Arts & Humanities at Stockton University.

Fall 2016
Dr. Kim Landsbergern visited Stockton University with support of ARHU in 2016. She conducted a faculty workshop for Stockton ARTV and NAMS faculty, and held informal discussions with ARTV students. Currently Dr. Landsbergern and Mariana Smith developing a project addressing the unique eco-system of the NJ Pine Barrens, Midwest, and working towards including New Zealand partners to explore human impacts on eco systems (with a particular emphasis on the forest stewardship by Indigenous peoples in contrast to the XXI c. trends). This project is anticipated to bring a number of opportunities for the future curricular engagement.

Additional Stockton projects form the past will be considered per grant availability

BUDGET
2020 Grant support will facilitate the symposium programming, coordination of additional presenters' travel, lodging, and stipends, catering for the round table discussion with student break-out sessions as well as light refreshments for the additional artist lectures. Expanded event programming will also translate into additional expenses for the printed promotional materials.

The Stockton Gallery sponsors the exhibition (art work delivery, installation, insurance, management of the materials on loan from the University of Minnesota with total value of all loans estimated at $118,160.00) and a one (1) day stay for John Sabraw and one (1) catered artist reception. The travel expenses reflected in the following table for John Sabraw address the expenses associated with the extended schedule. (for the detailed breakdown of the activities and stipend allocation, please see the attached Budget Supplemental

In-Kind donations
With the requested stipend, Phyllis and Victor Merriam will waive their travel, lodging expenses John Sabraw will deliver (drive the cargo truck with the artworks and the material samples and

model) in December 2019 rather than request a professional shipping services for that delivery. Stockton Gallery student assistants will utilize the gallery equipment and card swipes to assist with the assessment data collection during the artist presentations and the round table discussions.

Categories	Request	Notes/Comments
Stipend Expenditures		
John Sabraw	$ 2500.00	2 lectures (ARTV, NAMS), round table discussion, studio visits
Gaylord Schanilec	$ 1500.00	1 lecture ARTV, roundtable discussion
Matthew T. McLaughlin	$ 1500.00	1 lecture ARTV, roundtable discussion, studio visits
Phyllis and Victor Merriam	$ 800.00	roundtable discussion
Kim Landsbergern	$ 800.00	roundtable discussion
Student assistant	$ 220.00	student at $10h to assist with assessment activities
Total Stipend Expenditures	**$ 7320.00**	
Non-Stipend Expenditures (supplies, travel, etc.)		
John Sabraw	$ 1200.00	Transportation via air [CMH to PHL r/t] $319 .88 + $65 .11 (taxes) = $384 .99 Lodging [5 nights] @$94 ea.= $470, M&IE
Gaylord Schanilec	$ 1000.00	Lodging 3 nights @ 95/day, airfare from [MSP to PHL r/t] +taxes luggage $250 (allow $350), M&EI 4 days @66/day $264 and miscellany
Matthew T. McLaughlin	$ 900.00	Travel and lodging
Kim Landsbergern	$ 900.00	Travel and lodging
Catering	$ 2300.00	Chartwell $1100.00 catering buffet (round table), 3 x $400.00 per visiting artist presentation (light drinks and refreshments)
Promotional materials	$ 1000.00	Symposium announcements and posters, printing costs for students' poster
Total Non-Stipend Expenditures	**$ 7300.00**	
Total Salary + Non-Salary Expenditures	**$ 14620.00**	

RESEARCH CREATION

Overview

Research-creation can be described as an intersection of art practice, theoretical concepts, and research. As a developing research trend in academia, it links the interpretive disciplines (humanities and social sciences) with creative ones (art and design). It is an experimental trans-disciplinary practice that is used by artists and designers who incorporate a hybrid form of artistic practice between the arts and science, or social science research; scholars attuned to the role of the arts and creativity in their own areas of expertise; and educators interested in developing curriculum and pedagogy grounded in cultural production. As such involves the creation of knowledge in and through creative material and performative practices.

Example of the institutional engagement with research creation is "Centre For Interdisciplinary Studies in Society and Culture" where the Research-Creation stream in Concordia University is supported by Hexagram Network membership. This international network of over eighty members is dedicated to research-creation working with Université du Québec à Montréal (UQAM), Concordia University, with additional researchers from l'Université de Montréal, l'École de technologie supérieure, l'Université du Québec à Chicoutimi and McGill University. The network collaborates with organizations in Québec, across Canada, and around the world (Europe, Latin America, the United States, Asia and Australia).

2020 Proposal Research-creation outcomes

1. **Speculate:** Research-creation is future event oriented. As a speculative practice, it invents techniques of relation. Research-creation is attuned to processes rather than the communication of outputs or products.

   Proposed interdisciplinary exhibitions and roundtable discussions will highlight the professional practices and create learning opportunities to demonstrate and explore the techniques of relation, comparison and contrast of creative and scientific processes, and speculative practices.

2. **Propose enabling constraints:** Enabling constraints are expansive and suggestive. They operate by delimiting process and possibility, although they always include more possibilities than any given event realizes.

   Boundaries and relation determined by disciplinary boundaries (visual art and natural science) meeting as a round table discussions and presentations facilitate a space where students in conversation with scholars, will interpret the relationship between the disciplines, break down the boundaries by challenging the points of specialists' view, and will connect with different perspectives. While presenting a space for social gathering, such thematic group exhibition provides a space for self-reflection, invites analysis of how different disciplines and audiences address the issues at hand, and provides a platform for the community to gain a voice in the public and academic spaces.

3. **Create problems:** Research-creation is a practice that does not seek to describe, explain, or solve problems. Rather, it is an 'event' that creates concepts that problematize. Concepts are not pre-given or known in advance.

   Themed art exhibition and round table discussions function as an event where the brainstorming sessions and an informal exchange of ideas framed as research-creation can bring something new into the world.

4. **More-than-represent:** Rather than attempting to 'represent' or report on, research-creation use them to propel further thought, and create something new: new concepts, new ethico-political concerns, new problems.

   Themed exhibitions seen through the lens of different academic disciplines and how each community implements the means of research, sustainability and interdisciplinary endeavors. Bring together visions from diverse academic communities in conjunction with proposed symposium will establish a platform to facilitate learning opportunities and self-reflection

In the current climate, what role does research-creation play in relation to artistic creation? What impact can it have on aesthetic, technical and methodological innovation? Can it serve to shed some light on artists' creative processes?

These questions are vital in relation to the important work being undertaken in the fields of aesthetics, epistemology and cognitive science.

Following document is a draft proposal.
The round table discussion questions will be adjusted with the input form the Stockton faculty and visiting artist participants and finalized in January 2020 pending the grant availability.
the topic-based round tables where students can interact and brainstorm with the scholars and artists.

Three (3) tables where an artist and scientist will hold an informal presentation and talk to students about such topics as art/science crossovers and examples of art activism to support science as well as funding.
The round table event will foster an interactive environment among students, faculty, staff, and community (ER3), Deliver high value-added learning experiences and promote scholarly activity (S1), Promote liberal arts ideal to develop lifelong learners (S2), Promote sustainability across the curriculum (IP4)
Because the artists' lectures will be presented on Feb 18 and 19th the conversation can move faster towards the brainstorming incubators.

Round Table Discussion Introduction (20 min)
The presenters introduce their interests and background (10min)
Students introduce their majors and overall academic and research interests (10 min) (student assistant takes notes and the worksheets are filled out)

Discussion and idea incubator
Part 1 (30 min)
The following discussion topics will connect to one of the table themes:

- Natural science and history reflected in art
- Sustainability and research-creation
- New technology and contemporary art applications in academia and research

Explore how the projects come together, networking and brainstorming. The participants will share how their projects came together
The worksheet will accommodate mapping of the following aspects of a collaborative project

- Main idea
- Potential partnerships, how to identify the potential collaborative venues
- Mind mapping
- How to develop a schedule for the project
- Funding questions

Part 2 (30 min) (student assistant takes notes and the worksheets are filled out)
Students based on the presentations and what they see in the gallery, are asked to draft possible ideas on the worksheet, working together with the visiting artists and faculty

- consider how their interests and major studies might work across disciplines
- explore how the Stockton spaces and offices can provide a network for a potential project

Part 3 (10 min) Reflection (participating students fill out the questionnaire)

- Which aspects of the discussion were surprising, which aspects were already known
- How likely students would be to pursue the project brainstormed
- What Stockton department or lab would student be most interested in working with

ART/SCIENCE exhibition
Stockton Gallery Downstairs
John Sabraw
www.johnsabraw.com/



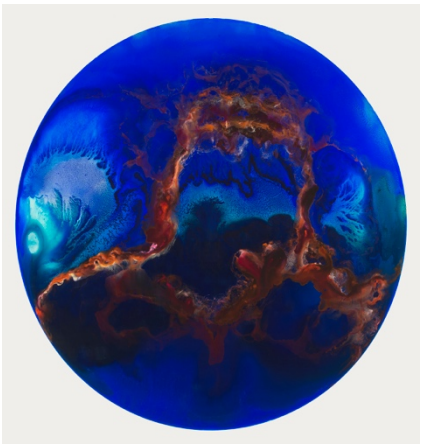
An artist, an activist, and environmentalist. The main focus of his research currently is working with Guy Riefler, a Professor of civil engineering at Ohio University and a team of engineers and watershed experts to remediate streams polluted by acid mine drainage from Ohio abandoned coal mines.

"We've got these huge abandoned coal mines, and when they flood, you get 300 million-year-old deposits dissolving into the water," Guy Riefler explains. "I wanted to remove the pollution, but then I realized that the pigment that results can be used as an acrylic paint." He joined forces with John Sabraw from the university's art department and the results have been spectacular. John's art — produced by pouring the toxins onto a level surface to create a "soupy craziness" — has been highly praised and widely exhibited.

Artist activist John Sabraw is working to return southeastern Ohio's streams to the picture of health. Sabraw has partnered with Guy Riefler to extract toxic acid mine drainage (AMD) from polluted streams and turn it into paint pigment. Once the pigment is sold on a commercial scale, revenue will be invested back into the streams' remediation.

Sabraw became inspired to transform the toxic sludge after moving to Ohio. While touring the southeastern part of the state with sustainability group "Kanawha", he was struck by the colors of the local streams – orange, red and brown. The polluted water contained iron oxide, which was flowing freely from abandoned coal mines. Sabraw reflects, "I thought it would be fantastic to use this toxic flow to make paintings rather than with imported iron oxide. It turned out that environmental engineer and fellow Ohio University professor Guy Riefler had already been working to create viable paint from this toxic sludge; so we began collaborating."
To make the pigment, Sabraw and Riefler intercept the AMD before it gets to the stream. They take the water back to the lab, neutralize it with sodium hydroxide or another base, then bubble oxygen through the water, causing the iron oxide to crystalize and fall to the bottom. The clean water is then returned to the stream. The iron oxide is blended with acrylic polymers and resins to make acrylic paint and with drying oils to make oil paint. Colors range in hues from yellow to brown to red to black, which are achieved by firing the pigment at different temperatures – up to 2000 degrees Fahrenheit – in a kiln at Ohio University's ceramics studio.
Sabraw tells the pigments' story via his circular artwork. "I make paintings that express the sublimity of nature but also the fragility of our relationship with it. All of my paintings use these toxic pigments in combination with standard artist colors", says Sabraw.

Sabraw and Riefler are building a pilot facility that will not only demonstrate their process, but will also serve as an immersive, educational installation. By producing the pigment on a commercial scale, they believe their closed-loop solution will provide the state a great service: restoring polluted streams from their own clean-up. The project will create eco job opportunities and can serve as a model for future environmental clean-up solutions. For more information, please visit johnsabraw.com.



Gaylord Schanilec

Gaylord Schanilec is a master fine printer and wood engraver. Under his imprint, Midnight Paper Sales, he has produced over forty limited edition books that are often inspired by historical texts, his rural Wisconsin surroundings, and poetry. The Special Collections Department and the Kohler Art Library hold a number of these works in their collections. This exhibit features his most recent artist books, blocks, a series of prints, and a representative sampling of his earlier books.

His most recent project, Lac des Pleurs, is a study of the 22-mile length of the upper Mississippi River known as Lake Pepin

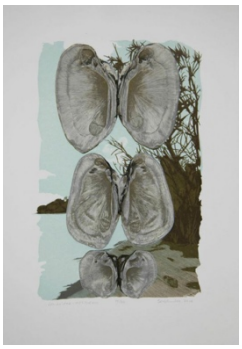
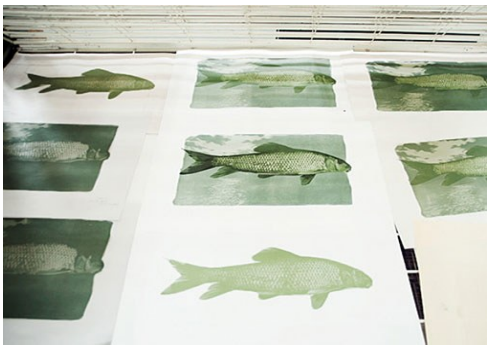
http://www.midnightpapersales.com/

https://mymightyjourney.tumblr.com/

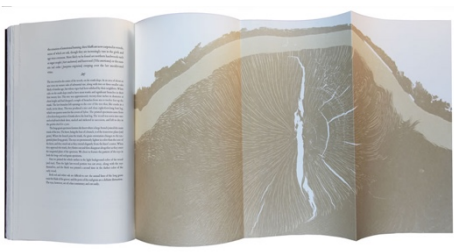


In addition to featuring proofs and the working materials from two of the spreads (Ancient Waterfall and Spirit Island), the exhibition will display the source inspiration material, including an engraving of St. Anthony Falls found in the Schoolcraft history books

http://www.midnightpapersales.com/lacdespleurs.html



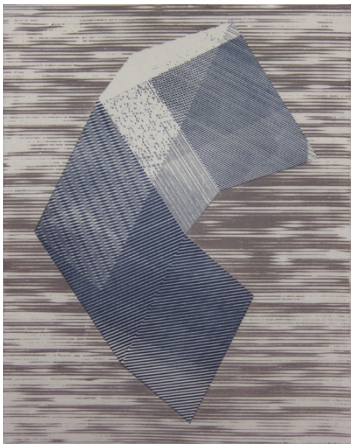


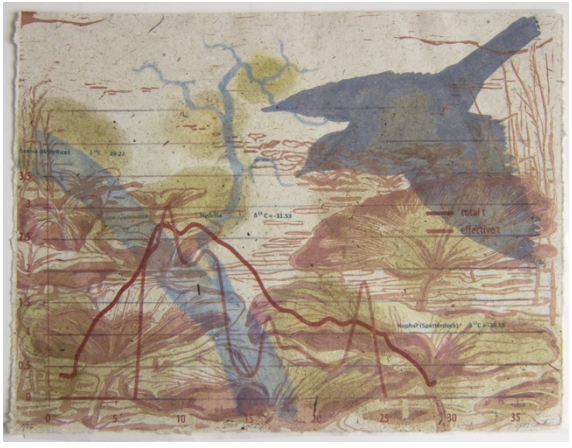

Stockton Gallery Upstairs

Intersecting Methods Portfolios 2014, 2016, 2018 (36 prints total)
Artist, Printmaker & Curator
http://www.matthewtmclaughlin.com/

R&D editions is a fine art press creating limited edition prints with artist, scientists and engineers. Each edition is a collaboration between the printer and the invited participant on a concept related to his or her work. Editions will be produced over a several months to year-long process dependent upon scale and detail of the conceived print.

As a process for creating art, printmaking has many similarities to the scientific method. Printmakers dream up the imagery, experiment with their mediums, proof their plates, manipulate the variables (one at a time) and proof again to be able to create the desired results in the final edition. Scientists, engineers and others in related fields work through similar steps in conducting experiments and attempting to prove or disprove a hypothesis.





Selected examples of art and science collaborations and crossovers in higher education

The academic support of such crossovers in the field of natural sciences and fine art studio practice is well documented. For example, the MIT Center for Art, Science & Technology (CAST) connects the worlds of art, science, and technology by collaborating with departments, labs, and centers across the Institute in four primary areas of activity. To integrate the arts across the curriculum, CAST supports the development of new classes that reach across disciplines and majors. To enrich and encourage artistic collaborations, CAST looks for unexpected partnerships for visiting artists and seeks to embed residencies in ongoing research and teaching at MIT.

The Arts, Science + Culture Initiative at the University of Chicago cultivates collaboration, active exchange, and sustained dialogue among those engaged in artistic and scientific inquiry and beyond.

The Nuffield Department of Medicine, Oxford University is committed to creating opportunities for scientists to reach broader audiences and different demographics, and feel that engagement with artists it's a great way to achieve this. Major UK funding organizations are also getting behind this concept: The National Institute for Medical Research supports an experimental and interdisciplinary Art Programme, which actively encourages artists to engage with scientists, while the Welcome Trust Arts Awards support imaginative and experimental arts projects that explore biomedical science. The Welcome Collection also supports exhibitions that fuse science and art.

2002 Wyss Institute for Biologically Inspired Engineering at Harvard University inaugurated The Design Triennial series. Events feature projects that highlight the ways designers are collaborating with scientists, engineers, farmers, environmentalists, and nature itself to design a more harmonious and regenerative future. The works featured span various design disciplines, including architecture, urbanism, product design, landscape design, fashion, communication design, and healthcare that enhance and reimagine humans' relationship to the natural world.

In 2019 the "European Digital Art and Science Network" was renewed as a manifold network consisting of scientific mentoring institutions (ESA, CERN and ESO), representing Europe's peak in scientific research where the main idea of the network is to draw a bow between micro- and macro-cosmos of science and arts.

2018 book "The Integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education: Branches from the Same Tree" by David Skorton and Ashley Bear, Committee on Integrating Higher Education in the Arts, Humanities, Sciences, Engineering, and Medicine; Board on Higher Education and Workforce; Policy and Global Affairs; National Academies of Sciences, Engineering, and Medicine examine the evidence behind the assertion that educational programs that mutually integrate learning experiences in the humanities and arts with science, technology, engineering, mathematics, and medicine (STEMM) lead to improved educational and career outcomes for undergraduate and graduate students.