



ESTABLISHING GRADUATE CERTIFICATES
ARIZONA STATE UNIVERSITY
GRADUATE EDUCATION

This form should be used by programs seeking to establish a new graduate certificate. All sections should be completed.

The graduate certificate is a programmatic or linked series of courses in a single field or in one that crosses disciplinary boundaries. The graduate certificate facilitates professional growth for people who already hold the baccalaureate degree, and it may be freestanding or linked to a degree program. The graduate certificate enables the university to respond to societal needs while promoting university cooperation with corporate, industrial, and professional communities.

Submit the completed and signed (chairs, unit deans) proposal to the **Office of Graduate Academic Programs** in Graduate Education. Mail code: 1003 and electronic copies to eric.wertheimer@asu.edu or amanda.morales-calderon@asu.edu.

Please type.

Contact Name(s): Juergen Gadau Dayna Baumeister	Contact Phone(s): 480-965-2349/ 406-543-4108 x204
College: CLAS	
Department/School: School of Life Sciences	
Name of proposed Certificate: Certificate in Biomimicry	
Requested Effective Term and Year: Fall B 2014 (Note: May need to move to Spring 2015 if ASU Online is not yet available)	
Do Not Fill in this information: <u>Office Use Only</u> CIP Code:	

1. OVERVIEW. Below, please provide a brief overview of the certificate, including the rationale and need for the program, potential size and nature of the target audience, information on comparable programs (at ASU and/or peer institutions), how this program would relate to existing programs at ASU, and any additional appropriate information.

Biomimicry is an emerging discipline that seeks to emulate life's strategies for human design with a particular emphasis on sustainability. This Certificate in Biomimicry, delivered completely online, is designed to empower change-agents from a wide variety of disciplines who are passionate about learning from the world of biology and its applications to human design and want to bring the field of biomimicry into their discipline. Graduates from the program will be enabled to integrate biomimicry principles and tools into their current or planned professions, and serve as leaders in the emerging network of biomimicry researchers and practitioners.

The program is designed to address the growing global demand for biomimicry training that can match the logistical and training needs of professionals. The only currently existing program of its kind, led by Biomimicry 3.8, a social enterprise and the globally recognized leader in the field of biomimicry, is being converted into this certificate at ASU through the emerging biomimicry center at ASU (a joint effort between ASU and Biomimicry 3.8). A Certificate in Biomimicry will be attractive to students from multiple disciplines (e.g. Sustainability, Life Sciences, Engineering, Design, Business) but at the same time is unique and does not overlap with currently offered programs at ASU. Additionally, because this program is offered through ASU Online, it will be available to a global audience seeking graduate training. It also provides the opportunity for professionals to take courses at a pace that meets their schedules and availability.

The program addresses the growing demand from professionals around the world who are seeking to embed biomimicry into their current practice. As such, unlike many graduate programs, which deepen the thinking within one's discipline, this certificate provides the opportunity for students to create a hybrid of their current discipline with biomimicry. To that end, participants with at least a few years of experience in their specific discipline will benefit the most from the training. The certificate is open to a wide variety of

disciplines and the coursework is focused on the tools and methodologies of biomimicry in the context of how they can be integrated into a wide variety of disciplines and industries. This integration work is at the graduate level and would be quite difficult for someone without training in some discipline already to integrate the content into their current knowledge base.

Graduates of the Biomimicry Specialist program of Biomimicry 3.8, which this Certificate in Biomimicry is designed to replace, have come from disciplines as broad as architecture, engineering, finance, industrial design, and organizational design. To best understand how the graduates of the Certificate are anticipated to use their knowledge, a snapshot of these graduates is presented below:

- Arndt Pechstein, a neuroscientist and engineer from Berlin took his biomimicry knowledge to reimagine sustainable transportation.
- Carlos Rego, an industrial designer from Portugal has redesigned two packaging bottles using biomimicry and converted his whole firm to using principles from nature for sustainable design.
- Thom Knittel, an architect with the largest firm in North America, has designed an orphanage for post-quake Haiti incorporating biomimicry,
- Katherine Collins, formerly a financial advisor with Fidelity, wrote a book called *The Nature of Investing: Resilient Investment Strategies through Biomimicry*, and
- Toby Herzlich, an organizational design facilitator and peace negotiator in Palestine has started a non-profit called Biomimicry for Social Innovation.

In addition to the audience this online certificate will reach globally, the same content can be offered to current students at ASU who are wishing to blend their current studies with biomimicry. This process can happen gradually over the next several years.

2. ADMINISTRATION AND RESOURCES

- A. How will the proposed certificate be administered (including recommendations for admissions, student advisement, retention etc.)? Describe the administering body in detail, especially if the proposed certificate is part of a larger interdisciplinary agenda. How will the graduate support staffing needs for this proposed certificate program be met?

The program will be administered through the Graduate Office in the School of Life Sciences, which currently has 2 ½ staff positions and is overseeing 11 graduate programs. SOLS staff and Associate Director for Graduate Studies has experience and is currently administering several interdisciplinary graduate programs. The staff will oversee recruitment and application of future students and the administration of enrolled students. Admissions will be managed by the newly forming Biomimicry Center, co-directed by Dayna Baumeister and Prasad Boradkar.

- B. What are the resource implications for the proposed certificate, including projected budget needs? Will new books, library holdings, equipment, laboratory space and/or personnel be required now or in the future? If multiple units/programs will collaborate in offering this certificate, please discuss the resource contribution of each participating program. Letters of support must be included from all academic units that will commit resources to this certificate program.

Since the courses are taught solely online (through ASU Online) no additional on-campus resources are necessary. This program is a breakout of an existing program offered by Biomimicry 3.8 that has completed three cohorts already. It is a globally renowned program, and the only one of its kind in the world. Global biomimicry expert, Dr. Dayna Baumeister designed and leads the program and is newly named co-director of the Biomimicry 3.8 Center at ASU and appointed as a Professor of Practice with SoLS. Several universities have expressed interest in hosting this program for accreditation, but Biomimicry 3.8 chose ASU because of its innovative approach to education and its emphasis on sustainability and entrepreneurship.

3. ADMISSIONS PROCEDURES AND CRITERIA

- A. **Admission criteria** – Applicants must meet the admissions criteria for Graduate Education. Please also include any other additional admission requirements, e.g. type of undergraduate degree, minimum GPA, tests and/or entry-level skills that are required for this certificate program. (http://graduate.asu.edu/sites/default/files/GraduatePolicies_1.pdf)

Degree(s): Bachelor or equivalent. This is a “stand-alone” certificate and is open to any graduate or non-degree graduate student, as well as working professionals who hold a bachelors or equivalent degree. Students potentially interested in such a certificate can come from a wide range of interest, e.g. *Sustainability, Life Sciences, Engineering, Design, Architecture, Business*. The breadth of disciplines creates the opportunity for even greater trans-disciplinary learning, inherent in the coursework, as well as provides the opportunity to bring biomimicry into disciplines where it has received less attention historically. Additionally, Biomimicry 3.8 has attracted a large pool of professionals globally interested in on-line graduate training that come from the disciplines above, as well as many more.

GPA: Minimum of a 3.00 cumulative GPA (scale is 4.0=A) in the last 60 hours of a student’s bachelor’s degree program or equivalent.

English Proficiency Requirement for International Applicants: (See Graduate Education policies and procedures) (http://graduate.asu.edu/admissions/international/english_proficiency): Same as Graduate Education policy.

Required Admission Examinations: GRE GMAT Millers Analogies None required

B. Application Review Terms

Indicate all terms for which applications for admissions are accepted and the corresponding application deadline dates, if any:

Students may begin the certificate in either the fall, spring or summer terms. BMY 501 (1 credit) will be offered every quarter, including during the summer.

- Fall Deadline (month/year): July/15
 Spring Deadline (month/year): Dec/14

C. Projected annual admission/enrollment

How many students will be admitted immediately following final approval of the certificate? What are enrollment projections for the next three years?

We anticipate that about 40-50 students currently interested in the Biomimicry certificate program offered by Biomimicry 3.8 will enroll immediately in this program and followed by 50-100 students enrolling every semester over the next 3 years.

Year 1	Year 2	Year 3
40	100	150

4. ACADEMIC REQUIREMENTS

- A. Minimum credit hours required for certificate (15 credit hour minimum) 15
- B. Please describe the primary course delivery mode, (e.g., online, face-to-face, off-site etc.). Please note: If this proposed initiative will be offered completely online, clearly state that in this section.

All courses will be offered exclusively online through ASU Online.

- C. As applicable, please describe culminating experience required (e.g., internship, project, research paper, capstone course, etc.)

BMV 530 Biomimicry Virtual Design Lab Practicum (2 credit hours)

This practicum is designed to allow participants to dive deep into the biomimicry tools and resources presented during the program and to apply them selectively to a specific and unique opportunity of the student's choosing. Projects should have a meaningful outcome achievable within the semester, and should engage the scoping, discovering, creating and evaluating phases of Biomimicry Thinking. Deliverables are milestone based, and the final deliverable should have application in a real-world setting.

- D. What knowledge, competencies, and skills (learning outcomes) should graduates have when they complete this proposed certificate program? Examples of program learning outcomes can be found at (<https://uoeee.asu.edu/program-outcomes>).

[Note: A sphere references the specific discipline or area of interest a student may have and to which they wish to apply biomimicry].

- Integrate biomimicry thinking into any sphere-specific opportunity resulting in biomimetic outcomes
 - Apply Life's Principles to specific needs within one's sphere
 - Facilitate the integration of biology into design within one's sphere using biomimicry thinking
 - Guide processes in one's sphere towards sustainability
 - Interpret observations in nature with a functional lens for design applications
 - Abstract design principles from biological observations for application to one's sphere
 - Communicate effectively through verbal and visual means how the process of biomimicry works in one's sphere
 - Initiate or transform one's practice to specialize in biomimicry
 - Engage and lead others within one's current company/organization to begin practicing biomimicry
- E. How will students be assessed and evaluated in achieving the knowledge, competencies, and skills outlined in 4.D. above? Examples of assessment methods can be found at (<http://www.asu.edu/oue/assessment.html>).

In addition to the specific assessment plans outlined below, indirect measures will include feedback surveys at the conclusion of each course, and follow-up activities documented in the Biomimicry Practitioner's Reef, whose membership is limited to graduates of the certificate program or the Master's degree.

Assessment Plan

Outcome 1:	Graduates of the Biomimicry certificate program will be able to apply Biomimicry Thinking (the methodology and framework of biomimicry) to their specific discipline.
Measure 1.1	Presentation of solutions generated using Biomimicry Thinking as part of their deliverable of the Biomimicry Thinking course.
Performance Criterion 1.1	At least 80% of the students will receive a passing score on the final project of the BMV 504 Bioimicry Thinking course.
Measure 1.2	Execution of a successful project for the BMV 530 Biomimicry Virtual Design Lab Practicum.
Performance	At least 80% of the students will be rated 1, 2, or 3 on a scale of 5 (1=highest)

Criterion 1.2	for this project based on the average of all course faculty for each student.
Outcome 2:	Graduates of the Biomimicry certificate program will be able to incorporate Life's Principles, guidelines for sustainable design that follow from life's strategies, into their practice of biomimicry in their discipline.
Measure 2.1	Direct application of Life's Principles into a discipline specific project.
Performance Criterion 2.1	At least 80% of the students will submit a demonstration of incorporating Life's Principles into their own work during either the BMY 502 Life's Principles course or the BMY 530 Biomimicry Virtual Design Lab Practicum.
Measure 2.2	Demonstrated collaboration skills with Life's Principles across disciplines within the practice of biomimicry.
Performance Criterion 2.2	At least 80% of the students will be rated 1, 2, or 3 on a scale of 5 (1=highest) on average by their peers, colleagues and faculty using a survey at the conclusion of the Virtual Design Lab Practicum and Biomimicry Thinking courses.

- F. Please state the Satisfactory student academic progress standards and guidelines (including any time limits for completion).

Students have to finish successfully all course work within 6 years and have to follow the ASU Graduate Education satisfactory progress policy outlined at http://graduate.asu.edu/sites/default/files/Guidelines_for_Academic_Progress.pdf.

- G. Will this proposed certificate program allow sharing of credit hours from another ASU degree program to be used as part of this certificate program? (Please note that a maximum of 9 graduate-level credit hours taken as a non-degree student at ASU, including as a part of a certificate program, may be used towards a future graduate degree at ASU).

No.

- H. Below, please list all required and elective courses in the appropriate boxes (you may attach additional pages if necessary).

Please ensure that all *new core* course proposals have been submitted to the Provost's office through the Curriculum ChangeMaker online course proposal submission system before this initiative is put on the University Graduate Council and CAPC agendas. Please note: a minimum of 2/3 of the courses required for a graduate certificate must be at the 500-level or above.

A note on courses and faculty involved in course instruction:

- 1) BMY 501 is a survey course taught by multiple instructors (one per week) that also includes guest instructors. All instructors have a graduate degree or equivalent and all are adjunct faculty or current tenured and non-tenured faculty at ASU. Professor of Practice, Dayna Baumeister, PhD is the lead faculty for this course.
- 2) BMY 502 and BMY 503 are primarily biology courses that will be taught initially by Dayna Baumeister, PhD, but ultimately can be taught by other biology faculty who have received some training in this approach and can provide the integration back to biomimicry, perhaps in a team taught manner. Additional biomimicry trained PhDs with biology degrees may be brought in as adjuncts as enrollment grows.
- 3) BMY 504 is an interdisciplinary course that focuses on the methodology of biomimicry. It must be taught by trained biomimicry professionals. Only those with at least a Master's or equivalent would be considered as instructors. Currently, potential faculty for this course are only adjunct with ASU, but this could change over time, and the Biomimicry Center has some budget for ASU faculty training for that purpose.
- 4) BMY 530 is an applied project culminating experience that requires the mentorship of 1-2 faculty. At least one of those faculty should be closely associated with the Biomimicry Center at ASU. The other may be selected from elsewhere on the ASU campus and the "matchmaking" will be facilitated by the Biomimicry Center.

<u>Required Courses</u>			<u>Credit Hours</u>
(Prefix & Number)	(Course Title)	(New Course ?) Yes or No?	13
BMY 501	Essentials of Biomimicry	Yes	1
BMY 502	Life's Principles	Yes	4
BMY 503	Biology Taught Functionally	Yes	4
BMY 504	Biomimicry Thinking	Yes	4
<u>Electives</u>			<u>Credit Hours</u>
(Prefix & Number)	(Course Title)	(New Course ?) Yes or No?	0
<u>Culminating Experience (if applicable)</u>			<u>Credit Hours</u>
BMY 530 Biomimicry Virtual Design Lab Practicum			2
Total required credit hours			

5. PRIMARY FACULTY PARTICIPANTS - Please list all primary faculty participants for the proposed certificate, including home unit and title. You may attach additional pages if necessary.

Name	Home Unit	Title
Dayna Baumeister	SOLS	Professor of Practice
Juergen Gadau	SOLS	Professor
Karen Allen	SOLS	Adjunct Professor
Prasad Boradkar	Herberger Institute for Design and Art	Associate Professor
Thomas Baumeister	SOLS	Professor of Practice
Erin Leitch	SOLS	Adjunct Professor

6. REQUIRED SUPPORTING DOCUMENTS
(Please label accordingly, i.e., Appendix or Attachment A, B, etc.)

Please include the following with your proposal:

- A. Sample plans of study for students in the proposed program (See Attachment A)
- B. Statements of support from all deans and heads of impacted academic units (See Attachment B)


7. APPROVALS - If the proposal submission involves multiple units, please include letters of support from those units.


DEPARTMENT CHAIR or SCHOOL DIRECTOR (PRINT/TYPE)

Brian H Smith

SIGNATURE

DATE

	24 Feb 2014
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DEAN (PRINT/TYPE) Kenro Kusumi, Assoc. Dean of Graduate Programs, CLAS	
SIGNATURE 	DATE 3/20/14

The following section will be completed by Graduate Education following the recommendations of faculty governance bodies.

VICE PROVOST FOR GRADUATE EDUCATION	
SIGNATURE	DATE

Please note: Proposals for new certificates also require the review and recommendation of approval from the University Graduate Council, Curriculum and Academic Programs Committee (CAPC), the Academic Senate, and the Office of the Provost before they can be put into operation.

The final approval notification will come from the Office of the Provost.

GF1112G-89

APPENDIX

OPERATIONAL INFORMATION FOR GRADUATE CERTIFICATES

(This information is used to populate the [Graduate Programs Search](#) website.)

1. Provide a brief (catalog type - no more than 150 words) program description.

The graduate Certificate in Biomimicry, the practice of emulating nature's strategies for human designs, is offered at ASU in conjunction with Biomimicry 3.8 is designed to introduce and delve into the core fundamentals of biomimicry, such as Biomimicry Thinking and Life's Principles with the intention to apply and integrate the knowledge and tools to one's specific interests/discipline. Participants will have the opportunity through dedicated time and mentorship from instructors, to explore the application of these core fundamentals in their own discipline, field, or area of interest during the "Biomimicry Virtual Design Lab," Graduates will have the ability to work toward innovative and sustainable solutions within their discipline drawing upon time-tested sustainable solutions of the last 3.8 billion years.

Bulleted Curricular Items:

Core – 13 credit hours

Culminating Experience - BMY 530 Biomimicry Virtual Design Lab Practicum 2 credit hours

Total – 15 credit hours

- 2. Campus(es) where program will be offered: ***
- | | |
|---|--------------------------------|
| <input type="checkbox"/> Downtown | <input type="checkbox"/> Tempe |
| <input checked="" type="checkbox"/> Online (only) | <input type="checkbox"/> West |

Polytechnic

* **To select desired box**, place cursor on the left side of the box, right click mouse, select **Properties**, under **Default Value** select **Checked**, press **OK** and the desired box will be checked

3. **Keywords:** (List all keywords that could be used to search for this program. Keywords should be specific to the proposed program.)

Biomimicry, bio-inspired design, sustainable innovation

4. **Area(s) of Interest:**

* **To select desired box**, place cursor on the left side of the box, right click mouse, select **Properties**, under **Default Value** select **Checked**, press **OK** and the desired box will be checked

- A. Select one (1) primary area of interest from the list below that applies to this program

- [Architecture & Construction](#)
- [Arts](#)
- [Business](#)
- [Communications & Media](#)
- [Education & Teaching](#)
- [Engineering & Technology](#)
- [Entrepreneurship](#)
- [Health & Wellness](#)
- [Humanities](#)
- [Interdisciplinary Studies](#)
- [Law & Justice](#)
- [Mathematics](#)
- [Psychology](#)
- [STEM](#)
- [Science](#)
- [Social and Behavioral Sciences](#)
- [Sustainability](#)

- B. Select one (1) secondary area of interest from the list below that applies to this program.

- [Architecture & Construction](#)
- [Arts](#)
- [Business](#)
- [Communications & Media](#)
- [Education & Teaching](#)
- [Engineering & Technology](#)
- [Entrepreneurship](#)
- [Health & Wellness](#)
- [Humanities](#)
- [Interdisciplinary Studies](#)
- [Law & Justice](#)
- [Mathematics](#)
- [Psychology](#)
- [STEM](#)
- [Science](#)
- [Social and Behavioral Sciences](#)
- [Sustainability](#)

(NEW GRADUATE INITIATIVES)

PROPOSAL PROCEDURES CHECKLIST

Academic units should adhere to the following procedures when requesting new curricular initiatives (degrees, concentrations or certificates).

- Obtain the required approval from the Office of the Provost to move the initiative forward for internal ASU governance reviews/approvals.**
 - Establishment of new curricular initiative requests; degrees, concentrations, or certificates
 - Rename requests; existing degrees, concentrations or certificates
 - Disestablishment requests; existing degrees, concentrations or certificates
- Submit any new courses that will be required for the new curricular program to the Curriculum ChangeMaker online course approval system for review and approval.**
 - Additional information can be found at the Provost's Office Curriculum Development website: [Courses link](#)
 - For questions regarding proposing new courses, send an email to: courses@asu.edu
- Prepare the applicable proposal template and operational appendix for the proposed initiative.**
 - New degree, concentration and certificate templates (contain proposal template and operational appendix) can be found at the Provost's Office Curriculum Development website: [Academic Programs link](#)
- Obtain letters or memos of support or collaboration. (if applicable)**
 - When resources (faculty or courses) from another academic unit will be utilized
 - When other academic units may be impacted by the proposed program request
- Obtain the internal reviews/approvals of the academic unit.**
 - Internal faculty governance review committee(s)
 - Academic unit head (e.g. Department Chair or School Director)
 - Academic unit Dean (will submit approved proposal to the curriculumplanning@asu.edu email account for further ASU internal governance reviews (as applicable, University Graduate Council, CAPC and Senate)

Additional Recommendations - All new graduate programs require specific processes and procedures to maintain a successful degree program. Below are items that Graduate Education strongly recommends that academic units establish after the program is approved for implementation.

- Set-up a Graduate Faculty Roster for new PhD Programs** – This roster will include the faculty eligible to mentor, co-chair or chair dissertations. For more information, please go to http://graduate.asu.edu/graduate_faculty_initiative.
- Establish Satisfactory Academic Progress Policies, Processes and Guidelines** – Check within the proposing academic unit and/or college to see if there are existing academic progress policies and processes in place. If none have been established, please go to http://graduate.asu.edu/faculty_staff/policies and scroll down to the **academic progress review and remediation processes** (for faculty and staff) section to locate the reference tool and samples for establishing these procedures.
- Establish a Graduate Student Handbook for the New Degree Program** – Students need to know the specific requirements and milestones they must meet throughout their degree program. A Graduate Student Handbook provided to students when they are admitted to the degree program and published on the website for the new degree gives students this information. Include in the handbook the unit/college satisfactory academic progress policies, current degree program requirements (outlined in the approved proposal) and provide a link to the Graduate Policies and Procedures website. Please go to http://graduate.asu.edu/faculty_staff/policies to access Graduate Policies and Procedures.

Attachment A - Sample Plan of Study

Sample Plan of Study:

BMY 501	Essentials of Biomimicry	Fall B 2014	1
BMY 502	Life's Principles	Summer 2015	4
BMY 503	Biology Taught Functionally	Spring 2015	4
BMY 504	Biomimicry Thinking	Fall 2015	4
BMY 530	Biomimicry Virtual Design Lab	Spring 2016	2
			15

Course Descriptions:

Course Title **BMY 501 Essential of Biomimicry**

1 credit

The Essentials of Biomimicry is a one-quarter class (7.5 weeks) offered as introductory sampler to the various topics (discipline, emulate, ethos, (re)connect & iSites, human-nature connection, Biomimicry Thinking, and Life's Principles) within the discipline of biomimicry. Each week is devoted to a specific topic and is led by a different instructor. The course is intended to provide a basic overview of each aspect of the discipline with ample opportunity for conversation and dialogue around the specific components, with an understanding that greater depth into each topic can be learned by taking the advanced BMY courses.

Course Title **BMY 502 Life's Principles**

4 credits

Life's Principles are nature's universal design guidelines based on 3.8 billion years of successful strategies across all life. With instruction by Dr. Dayna Baumeister, this 15-week course on-line takes participants on a deep dive of Life's Principles. It includes the review and study of life's operating conditions on Earth, the six primary principles, and their related sub-principles. This course gives participants the knowledge necessary to bring these design guidelines into practice and provides opportunity to integrate them into one's discipline.

Course Title **BMY 503 Biology Taught Functionally**

4 credits

Biomimicry teaches biology through the lens of function, thereby providing a core understanding in biology for all students, no matter their background. This course explores how biologists gather and research information and how that knowledge can inform other disciplines. It also introduces the art of translating biological concepts into strategies for application, which is then carried throughout all the courses. You will learn how to work with biologists on a biomimicry team and how to weave biology and biomimicry together. You will learn to look at nature through the function lens, and how to identify subject matter experts needed for interdisciplinary teams.

Course Title **BMY 504 Biomimicry Thinking**

4 credits

Biomimicry Thinking is the practice of biomimicry from a methodology-based approach. Led by Dr. Dayna Baumeister, this 15-week exploration into the Biomimicry methodology reviews how biology and biomimicry can be incorporated into the four major phases of any design process: scoping, discovering,

creating, and evaluating. It introduces the art of translating biological concepts into strategies for application and building a taxonomy of design principles.

Course: **BMV 530 Virtual Design Lab Practicum**

2 Credits

This practicum is designed to allow participants to dive deep into the biomimicry tools and resources presented during the program and to apply them selectively to a specific and unique opportunity of the students choosing. Projects should have a meaningful outcome achievable within the semester, and should engage the scoping, discovering, creating and evaluating phases of Biomimicry Thinking. Deliverables are milestone based, and the final deliverable should have application in a real-world setting.

Attachment B - Support Statements

College of Liberal Arts and Sciences Official Submission

From: Paul LePore [<mailto:Paul.Lepore@asu.edu>]
Sent: Thursday, March 20, 2014 1:27 PM
To: curriculumplanning@asu.edu
Cc: Jenny Smith; Paul LePore
Subject: Graduate Certificate in Biomimicry

Please accept the new program proposal for a Graduate Certificate in Biomimicry.

Thank you.

PL

PAUL C. LEPORE, Ph.D.
Associate Dean
College of Liberal Arts and Sciences
Foundation Building, Suite 110

Arizona State University | P.O. Box 876605 | Tempe, Arizona 85287-6605
480.965.6506 | Fax: 480.965.2110 | e-mail: paul.lepore@asu.edu

ASU College of Liberal Arts and Sciences — *Transforming learning, discovery and lives*

ASU Online Approval

From: Juergen Gadau
Sent: Monday, April 07, 2014 9:04 AM
To: Amanda Morales-Calderon
Cc: Jenny Smith; Kenro Kusumi; Dayna Baumeister; Eric Wertheimer
Subject: RE: Biomimicry online approval

Hi Amanda

Yes, we talked about the certificate in terms of standalone courses and possibility for students to use the certificate as a stepping stone to a MS. We discussed that the certificate alone without a possibility to do a MS would be less attractive for students.

Since all but one course in the certificate are part of the MS I think we are OK to assume that he will support both since taking the certificate just means taking the online courses that we are building anyhow.

Ciao, Juergen

Jürgen Gadau
Professor
Associate Director of Graduate Studies SOLS
Arizona State University
Jgadau@asu.edu
480-965-2349
Web-page: <http://gadau.lab.asu.edu/>

From: Amanda Morales-Calderon
Sent: Monday, April 07, 2014 9:00 AM
To: Juergen Gadau
Cc: Jenny Smith; Kenro Kusumi; Dayna Baumeister; Eric Wertheimer
Subject: RE: Biomimicry online approval
Importance: High

Hi Juergen,

I just read Phil Regier's email below more closely and he does not mention the certificate only the MS. When you met with him, did he express that he was ok with the graduate certificate in Biomimicry also being online?

Thanks,

--Amanda

From: Juergen Gadau
Sent: Thursday, April 03, 2014 9:39 PM
To: Kenro Kusumi; Dayna Baumeister
Cc: Jenny Smith; Amanda Morales-Calderon
Subject: FW: Biomimicry online approval

Hi Kenro and Amanda

Is it too late for the ASU online approval for the Biomimicry certificate and MS?
see below!

Ciao, Juergen

Juergen Gadau
Professor
Associate Director of Graduate Studies SOLS
Arizona State University
<http://gadau.lab.asu.edu/>
Jgadau@asu.edu
480-965-2349

From: Frederick Corey <FREDERICK.COREY@asu.edu>
Date: Thursday, April 3, 2014 6:57 PM
To: Robert Page <Robert.Page@asu.edu>, Philip Regier <atpr@asu.edu>
Cc: Juergen Gadau <Juergen.Gadau@asu.edu>, Kari Barlow <kbarlow@asu.edu>, Marc Van Horne <marc.vanhorne@asu.edu>, Patricia Feldman <Feldman@asu.edu>, Rebecca Newton <rnewton1@asu.edu>
Subject: RE: Biomimicry online approval

This is great. I will get it posted.

Fred

From: Robert Page
Sent: Thursday, April 03, 2014 5:46 PM
To: Philip Regier
Cc: Juergen Gadau; Kari Barlow; Marc Van Horne; Frederick Corey; Patricia Feldman; Rebecca Newton
Subject: Re: Biomimicry online approval

Great! Thanks Phil.

Robert E. Page, Jr.
University Provost
Arizona State University

On Apr 3, 2014, at 5:43 PM, "Philip Regier" <atpr@asu.edu> wrote:

Rob,

I met with Juergen and Prasad this afternoon, and I would now support offering the MS in Biomimicry online as a managed program through ASU Online.

Juergen said that most of the online coursework has already been built by Biomimicry 3.8; most of my group's work will involve transferring the coursework into BlackBoard and using our usual marketing channels to assist in developing enrollment for the program. Juergen also indicated that the online MS program would not be ready to launch prior to August, 2015 - a huge relief for us, because we have quite a bit to do prior to this August.

We discussed possible non-credit offerings as well, and will continue to explore as we move forward with the program.

Phil

--

Philip Regier

Executive Vice Provost and Dean, ASU Online and Extended Campus

phil.regier@asu.edu

480.235.9182 (cell)

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W. P. Carey School of Business

Support Statement

From: Amy Hillman <AMY.HILLMAN@asu.edu>
Date: Tuesday, August 19, 2014 5:50 PM
To: Prasad Boradkar <Prasad.Boradkar@asu.edu>
Cc: Dorothy Galvez <Dorothy.Galvez@asu.edu>
Subject: Re: Biomimicry Center

Hi Prasad,

We have no objections to your proposed certificate.

Amy

Amy Hillman
Dean, W. P. Carey School of Business
Rusty Lyon Chair of Strategy
Arizona State University
amy.hillman@asu.edu
@WPCDean

On Aug 19, 2014, at 1:24 PM, "Prasad Boradkar" <Prasad.Boradkar@asu.edu> wrote:

Dear Amy,

Hope you are doing well!

I have connected with Laurie Anderson, John Lastovicka and Nancy Gray about the new biomimicry center and will be getting them involved with the initiative.

I am writing to ask for your support for a graduate certificate in biomimicry. As part of starting this new center, we are partnering up with the Biomimicry Institute in Montana. They have an existing online certificate and the plan is to move that over to ASU. This certificate is taught by their faculty, who will be given adjust position in the School of Life Sciences.

I am attaching the certificate proposal for your reference.

If this is okay with you, would you mind sending me an email saying you support this certificate program? We have support from Engineering, Life Sciences and Sustainability. I have been asked to get support from Design and Business, and that is why I am reaching out to you.

If you have any questions, I am happy to come meet you or send more details.

Thanks Amy!

Prasad

Ira A. Fulton Schools of Engineering
Support Statement

Brian Skromme

July 31, 2014 2:32 PM

To: Dayna Baumeister

[Hide Details](#)

Cc: Prasad Boradkar, Jürgen Gadau

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RE: Follow-up from today's call re: Biomimicry Certificate and Master's

Hi Dayna:

I enjoyed speaking with you today and learning more about your programs. I forgot to ask you if you had had any discussions with Hao Yan, his work seems to overlap this area as well.

Regarding the impact of your proposed programs (the Graduate Certificate and MS degree in Biomimicry) on engineering, I do not foresee any negative impacts of your programs on any engineering programs or courses as they tend to serve different student populations.

Regards,

Brian Skromme

Brian J. Skromme, Professor and Assistant Dean
Office of Academic & Student Affairs, BYENG 688
Ira A. Fulton Schools of Engineering
Arizona State University, 699 S. Mill Ave.
PO Box 878109
Tempe, AZ 85287-8109
Phone (480) 965-5151 (M, W, F morning)
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Front Desk: 965-1726
e-mail: skromme@asu.edu

The Design School

Support Statement



20 August 2014

Prof. Prasad Boradkar
The Design School

Re: Proposed Certificate in Bio mimicry

Dear Prasad,

I have reviewed the proposal for a new graduate certificate program in Biomimicry, and am confident that this will be a strong program. I am happy to offer my support to the Biomimicry Certificate Program.

Warm regards,

A handwritten signature in black ink, appearing to read "Craig Evan Barton".

Craig Evan Barton,
Director

The Design School

PO Box 871605, Tempe, AZ 85287-1605
480.965.3536 Fax: 480.965.0968 design.asu.edu

College of Technology and Innovation (Now The Polytechnic School)
Support Statement

From: Scott Danielson [<mailto:Scott.Danielson@asu.edu>]
Sent: Thursday, February 20, 2014 5:09 PM
To: jgadau@asu.edu
Cc: Mitzi Montoya; James Collofello
Subject: RE: Letter of cooperation/support for the new certificate in Biomimicry

Dear Juergen,

This letter is to express the College of Technology and Innovation's support for a graduate certificate in biomimicry, as proposed by the School of Life Sciences in the College of Liberal Arts and Sciences.

The College of Technology and Innovation is pleased that you are leading ASU forward in biomimicry research, teaching, and practice and is happy to support these efforts.

Sincerely,

Scott Danielson, Ph.D., P.E.
Associate Dean for Academic Programs
College of Technology and Innovation
Arizona State University
480-727-1185

----- Original Message -----

Subject: Letter of cooperation/support for the new certificate in Biomimicry
From: Juergen Gadau <Juergen.Gadau@asu.edu>
To: Mitzi Montoya <Mitzi.Montoya@asu.edu>
CC: Dayna Baumeister <Dayna.Baumeister@asu.edu>

Dear Mitzi

Please find attached the proposal and new courses to establish a graduate certificate in Biomimicry. It would be great if you could write a short note that your college and you support the certificate.

Thanks, and if you have questions give me a call.

Ciao, Juergen

Jürgen Gadau
Professor
Associate Director of Graduate Studies SOLS
Arizona State University
jgadau@asu.edu
480-965-2349
Web-page: <http://gadau.lab.asu.edu/>