



**ARIZONA STATE UNIVERSITY  
PROPOSAL TO ESTABLISH A NEW GRADUATE DEGREE**

This template is to be used only by programs that have received specific written approval from the University Provost's Office to proceed with internal proposal development and review. A separate proposal must be submitted for each individual new degree program.

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**DEGREE PROGRAM**

**College/School(s) offering this degree:** College of Technology and Innovation (CTI)

**Unit(s) within college/school responsible for program:** Engineering

**If this is for an official joint degree program, list all units and colleges/schools that will be involved in offering the degree program and providing the necessary resources:** N/A

**Proposed Degree Name:** Master of Science in Engineering

**Master's Degree Type:** MS: Master of Science

**Proposed title of major:** Engineering

**Is a program fee required?** Yes  No

**Requested effective term:** Fall **and year:** 2013

(The first semester and year for which students may begin applying to the program)

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**PROPOSAL CONTACT INFORMATION**

(Person to contact regarding this proposal)

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**Name:** Chell Roberts

**Title:** Executive Dean

**Phone:** 480-727-1353

**email:** [chell.roberts@asu.edu](mailto:chell.roberts@asu.edu)

**DEAN APPROVAL**

This proposal has been approved by all necessary unit and College/School levels of review, and the College/School(s) has the resources to offer this degree program. I recommend implementation of the proposed degree program. *(Note: An electronic signature, an email from the dean or dean's designee, or a PDF of the signed signature page is acceptable.)*

**College Dean name:** Mitzi Montoya

*(please see attached email of approval)*

**College Dean Signature** \_\_\_\_\_ **Date:** \_\_\_\_\_

**College Dean name:**

*(if more than one college involved)*

**College Dean Signature** \_\_\_\_\_ **Date:** \_\_\_\_\_

**ARIZONA STATE UNIVERSITY  
PROPOSAL TO ESTABLISH A NEW GRADUATE DEGREE**

This proposal template should be completed in full and submitted to the University Provost's Office [mail to: [curriculumplanning@asu.edu](mailto:curriculumplanning@asu.edu)]. It must undergo all internal university review and approval steps including those at the unit, college, and university levels. A program **may not** be implemented until the Provost's Office notifies the academic unit that the program may be offered.

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**DEGREE PROGRAM INFORMATION**

**Master's Type:** Master of Science

**Proposed title of major:** Engineering

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**1. PURPOSE AND NATURE OF PROGRAM:**

**A. Brief program description –**

This program extends the unique approaches to engineering education developed at the Polytechnic campus at the undergraduate level to the graduate level. The M.S. in Engineering program consists of a core set of courses designed to develop applied analytical expertise across disciplinary boundaries, with direct applications of advanced design principles to system design, management and control. The expertise developed in the core curriculum is reinforced through focus areas building on existing unit faculty strengths, including alternative energy, mechanical, electrical and manufacturing engineering. Reflective of the approach taken to engineering education in the undergraduate program, the program incorporates a relevant project, required of all students in this degree program, within the focus area courses. The degree will offer a course-only option plus options culminating in a Master's thesis, capstone course or an applied project. Each of these options is designed to engage students with real-world applications of engineering and to develop problem-solving skills.

**B. Will concentrations be established under this degree program?**  Yes  No

**2. PROGRAM NEED -** Explain why the university should offer this program (include data and discussion of the target audience and market).

This program directly supports the continued development of applied engineering programs on the Polytechnic campus, while simultaneously supporting the design aspirations of the New American University (e.g., access and variety meeting the needs of students and society). This program will fill a void for graduates of the engineering and engineering technology programs at the Polytechnic campus that wish to continue their education in the Polytechnic environment, as well as leveraging the considerable capabilities and resources in place within the CTI. The College of Technology and Innovation (CTI) is engaging in projects that address important and relevant industry and society challenges that provide focus for many CTI activities and the evolution of its programs. The establishment of an MS in Engineering program that embraces the interdisciplinary nature of difficult problems, while recognizing the need for specialization within the broader team framework, provides a path forward for development of meaningful and significant progress on solutions to the global grand challenges. The current strengths of the CTI in alternate energy, robotics, manufacturing and multidisciplinary engineering in a project environment will be leveraged via this new MS in Engineering program.

Currently approximately 700 undergraduate students are enrolled in applied engineering programs at the Polytechnic campus, with approximately 150 graduate students enrolled in the existing Master of Science in Technology degree in engineering-related concentrations. This program fills a void for graduates of the general engineering program at the Polytechnic campus that wish to continue their education in this environment via an engineering graduate program (as compared to the M.S. in Technology), as well as leveraging the considerable capabilities and resources that are in place at this facility. The number of students that will be interested in, and can be conveniently recruited to this graduate program, is very significant within the existing Polytechnic campus student body. In

addition, the unique applied project focused nature of this program will attract students who are not interested in more traditional theoretical engineering degrees offered elsewhere within the state. CTI also believes this degree will prove attractive to international students, either seeking a graduate-only program or a continuation of an accelerated program affiliation with ASU.

**3. IMPACT ON OTHER PROGRAMS** - Attach any letters of collaboration/support from impacted programs.

While the Ira A. Fulton Schools of Engineering offers a variety of excellent discipline-specific Master of Science degrees, the proposed program provides an alternative path towards engineering graduate education. The proposed program will utilize a core-emphasis area structure with a focus on applied engineering problems. Thus, CTI believes this program will not compete with the Ira A. Fulton Schools of Engineering programs, rather it will provide a complementary approach to engineering-related graduate education. An email documenting the Ira A. Fulton Schools of Engineering's position with respect to this degree proposal is attached.

**4. PROJECTED ENROLLMENT** - How many new students do you anticipate enrolling in this program each year for the next five years? Please note, The Arizona Board of Regents (ABOR) requires nine masters and six doctoral degrees be awarded every three years. Thus, the projected enrollment numbers must account for this ABOR requirement.

5-YEAR PROJECTED ANNUAL ENROLLMENT					
Please utilize the following tabular format.	1 <sup>st</sup> Year	2 <sup>nd</sup> Year (Yr 1 continuing + new entering)	3 <sup>rd</sup> Year (Yr 1 & 2 continuing + new entering)	4 <sup>th</sup> Year (Yrs 1, 2, 3 continuing + new entering)	5 <sup>th</sup> Year (Yrs 1, 2, 3, 4 continuing + new entering)
Number of Students Majoring (Headcount)	45	90	120	150	150

**5. STUDENT LEARNING OUTCOMES AND ASSESMENT:**

**A. List the knowledge, competencies, and skills** students should have attained by graduation from the proposed degree program. (You can find examples of program Learning Outcomes at <http://www.asu.edu/oue/assessment.html>).

See the table below

**B. Describe the plans and methods to assess** whether students have achieved the knowledge, competencies and skills identified in the Learning Outcomes. (You can find examples of assessment methods at <http://www.asu.edu/oue/assessment.html>).

Assessment will be accomplished through course work, written materials produced by the students, and oral defense of the student's work for those pursuing the thesis or applied project option.

Objective	Outcome	Courses Supporting Outcomes	Assessment Method
Engineering Proficiency	Students will have ability to apply engineering knowledge to solve realistic engineering problems in a systems environment	All	Final exams in the classes, student portfolios, project reports and oral defense of disquisition.

Systematic Approach to Design	Students will apply a systematic approach and modern scientific design strategies to complex multifaceted problems.	EGR 530 Engineering System Design and Analysis and selected focus area courses	Final exams in the classes, student portfolios, oral defense of disquisition or project reports
Depth in Specialization Area	Students will demonstrate a mastery of topics in their chosen specialization area	Courses in specialization topics and capstone/project/thesis work	Final exams in the classes, student portfolios, oral defense of disquisition or project reports.
Demonstration of Competence	Students will carry out a project, the completion of which meaningfully contributes to relevant challenges in engineering practice	Thesis/individual applied project or capstone course	Written disquisition, oral defense of disquisition, feedback from industrial partners, project report

- 6. ACCREDITATION OR LICENSING REQUIREMENTS (if applicable):** Provide the names of the external agencies for accreditation, professional licensing, etc. that guide your curriculum for this program, if any. Describe any requirements for accreditation or licensing.  
**None**

**7. FACULTY, STAFF, AND RESOURCE REQUIREMENTS:**

**A. Faculty**

- i. **Current Faculty** - List the name, rank, highest degree, area of specialization/expertise and estimate of the level of involvement of all current faculty members who will teach in the program.

Name	Rank	Degree	Specialization	Involvement 1=Teach; 2=Teach+Advise 3=Teach, Advise, Admin
Mark Henderson	Professor	Ph.D.	Design	2
Timothy Lindquist	Professor	Ph.D.	Software Engineering	3
Lakshmi Munukutla	Professor	Ph.D.	Electrical Engineering	2
John Robertson	Professor	Ph.D.	Electrical Engineering	2
Scott Danielson	Assoc Prof	Ph.D.	Mechanical Engineering	2
Robert Grondin	Assoc Prof	Ph.D.	Electrical Engineering	2
Chen-Yuan Kuo	Assoc Prof	Ph.D.	Mechanical Engineering	3
Narciso Macia	Assoc Prof	Ph.D.	Electrical Engineering	2
Arunachalanadar Madakannan	Assoc Prof	Ph.D.	Energy Systems	2
Pavlos Mikellides	Assoc Prof	Ph.D.	Mechanical Engineering	2
Darryl Morrell	Assoc Prof	Ph.D.	Electrical Engineering	3
Changho Nam	Assoc Prof	Ph.D.	Aerospace Engineering	2
Dale Palmgren	Assoc Prof	Ph.D.	Mechanical Engineering	2
John Rajadas	Assoc Prof	Ph.D.	Aerospace Engineering	2
Anshuman Razdan	Professor	Ph.D.	Software Engineering	2
Chell Roberts	Professor	Ph.D.	Industrial Engineering	2
Bradley Rogers	Assoc Prof	Ph.D.	Mechanical Engineering	2
Thomas Sugar	Assoc Prof	Ph.D.	Mechanical Engineering	2

Jennifer Bekki	Asst. Prof.	Ph.D.	Industrial Engineering	2
Odesma Dalrymple	Asst. Prof.	Ph.D.	Electrical Engineering	2
John Femiani	Asst. Prof.	Ph.D.	Software Engineering	2
Kevin Gary	Assoc. Prof.	Ph.D.	Software Engineering	2
Kiril Hristovski	Asst. Prof.	Ph.D.	Civil Engineering	2
Sangram Redkar	Asst. Prof.	Ph.D.	Mechanical Engineering	2
Benjamin Ruddell	Asst. Prof.	Ph.D.	Civil Engineering	2
Govindasamy Tamizhmani	Clinical Professor	Ph.D.	Energy Systems	2
Robert Meitz	Instructor	Ph.D.	Mechanical Engineering	1
Richard Whitehouse	Lecturer	M.S.	Software Engineering	1
James Contes	Senior Lecturer	M.S.	Automotive	1
Jerry Gintz	Senior Lecturer	M.S.	Manufacturing	1
Trian Georgeou	Senior Lecturer	M.S.	Manufacturing	1
Scott Pollat	Lecturer	M.S.	Energy Systems	1
Sharon Lewis	Senior Lecturer	Ph.D.	Industrial Engineering	2
Ashraf Gaffar	Asst. Prof.	PhD	Software Engineering	2
Abdel Mayyas	Asst. Prof.	Ph.D.	Automotive Engineering	2
Angela Sodemann	Asst. Prof.	Ph.D.	Manufacturing	2
Sohum Sohoni	Asst. Prof.	Ph.D.	Software Engineering	2
Y. Gene Liao	Asst. Prof.	Ph.D.	Mechanical/Automotive Engineering	2
Shawn Jordan	Asst. Prof.	Ph.D.	Electrical Engineering	2
Ann McKenna	Assoc. Prof.	Ph.D.	Design	3

- ii. **New Faculty** - Describe the new faculty hiring needed during the next three years to sustain the program. List the anticipated hiring schedule and financial sources for supporting the addition of these faculty members.

None required in addition to the current planned hiring.

- iii. **Administration of the program** - Explain how the program will be administered for the purposes of admissions, advising, course offerings, etc. Discuss the available staff support.

Admission applications will be received, checked and distributed by a CTI staff member assigned to the graduate programs. An admissions committee, including faculty members representing various disciplines in the department, will review applications and make admission recommendations. A senior faculty member, on a rotating basis, will chair the admissions committee and serve as the graduate program coordinator. Overall administrative responsibility for the program resides with the Department Chair, currently Dr. Ann McKenna.

- B. Resource requirements needed to launch and sustain the program:** Describe any new resources required for this program's success such as new staff, new facilities, new library resources, new technology resources, etc

None are needed.

## 8. COURSES:

- A. Course Prefix(es):** Provide the following information for the proposed graduate program.

- i. Will a new course prefix(es) be required for this degree program?

Yes  No

- ii. If yes, complete the [Course Prefixes / Subjects Form](#) for each new prefix and submit it as part of this proposal submission.

**B. New Courses Required for Proposed Degree Program:** Provide course prefix, number, title, and credit hours and description for any new courses required for this degree program.

EGR 525, Lean Systems (3 credits). Study of enterprise level improvement strategies and process improvement approaches.

EGR 520, Principles of Systems Engineering (3 credits). The study of complex engineering project design and management over the life cycle of the project. Includes logistics, coordination of teams, and management of risk.

EGR 530, Engineering Systems Design and Analysis (3 credits). The application of systems theory to complex product development, blending the perspective of engineering design, customer need, and manufacturing. Prerequisite: EGR 520.

EGR 535, Engineering Innovation and Entrepreneurship (3 credits). Provides students with experience in the application of engineering systems innovation within an entrepreneurial setting of driving a product or process to successful launch. Includes protection of intellectual property and contractual relations.

EGR 570, Capstone Design (3 credits). Comprehensive project experience based on cumulative knowledge and skills gained in earlier course work.

**APPENDIX  
OPERATIONAL INFORMATION FOR GRADUATE PROGRAMS**

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

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

The M.S. in Engineering program consists of a core set of courses designed to develop applied analytical expertise across disciplinary boundaries, with direct applications of advanced design principles to system design, management and control. The expertise developed in the core curriculum is reinforced through focus areas that provide flexibility for the student, including alternative energy, mechanical, electrical and manufacturing engineering. The program incorporates a relevant project, required of all students in this degree program, within the focus area courses. The degree will offer options for students, culminating in a Master's thesis, an applied project or a capstone project course. Each of these options is designed to engage students with real-world applications of engineering and to develop problem-solving skills.

**2. Campus(es) where program will be offered:**

*(Please note that Office of the Provost approval is needed for ASU Online campus options.)*

**ASU Online only** (all courses online)

**All other campus options (please select all that apply):**

Downtown                       Polytechnic  
 Tempe                               West

**Both** on-campus **and**  ASU Online (\*) - (Check applicable campus from options listed.)

(\*) Please note: Once students elect a campus option, students will not be able to move back and forth between the on-campus (in-person) or hybrid options and the ASU Online campus option.

**3. Admission Requirements:**

**Degree:** Minimum of a Bachelor's or master's degree in what fields, or a closely related field from a regionally accredited College or University. An earned U.S. bachelor's degree or higher from a regionally accredited institution or the equivalent of a U.S. bachelor's degree from an international institution that is officially recognized by that country in engineering, physical sciences, mathematics or similar.

**GPA:** Minimum of a 3.00 cumulative GPA (scale is 4.0=A) in the last 60 hours of a student's first bachelor's degree program. Minimum of 3.00 cumulative GPA (scale is 4.0 = A) in the applicable Master's degree. Modify or expand if applicable.

The applicant must have maintained a "B" (3.00 on a 4.00 scale) grade point average (GPA) in the last 60 semester hours or 90-quarter hours of undergraduate coursework. If the applicant does not meet the minimum GPA requirements, the application may still be considered. In certain cases, demonstrated aptitude through professional experience or additional post-baccalaureate education will be considered.

**English Proficiency Requirement for International Applicants:** The English proficiency requirements are the same as the Graduate College requirement. (see Graduate College requirement [http://graduate.asu.edu/admissions/international/english\\_proficiency](http://graduate.asu.edu/admissions/international/english_proficiency)):  **Yes**                       **No**

If the student is from a country whose native language is not English (regardless of where they may now reside), they must provide proof of English proficiency. Acceptable proof is as follows: TOEFL score of at least 550 (PBT) or 80 (iBT), IELTS overall band score of at least 6.5, or Pearson Test of English (PTE) score of at least 60.

If applicable, list any English proficiency requirements that are supplementary to the Graduate College requirement.

**Foreign Language Exam:**

Foreign Language Examination(s) required? Yes No

If yes, list all foreign languages required:

**Required Admission Examinations:** GRE GMAT Millers Analogies None required  
(Select all that apply.)

**Letters of Recommendation:** Yes No

**4. Application Review Terms (if applicable Session):** Indicate all terms for which applications for Admissions are accepted and the corresponding application deadline dates, if any:

- Fall (regular)      Deadline (month/year): April 15<sup>th</sup>
- Session B            Deadline (month/year):
- Spring (regular)      Deadline (month/year): November 1<sup>st</sup>
- Session B            Deadline (month/year):
- Summer I      Deadline (month/year): March 15<sup>th</sup>
- Summer II      Deadline (month/year):

**5. Curricular Requirements:**

(Please expand tables as needed. Right click in white space of last cell. Select "Insert Rows Below")

**5A. Will concentrations be established under this degree program?**  Yes  No

**5B. Curricular Structure:**

<u>Required Core Courses for the Degree</u>			<u>Credit Hours</u>
<b>(Prefix &amp; Number)</b>	<b>(Course Title)</b>	<b>(New Course?) Yes or No?</b>	<b>(Insert Section Sub-total)</b>
			<b>12</b>
EGR 525	Lean Systems	Y	<b>3</b>
EGR 520	Principles of Systems Engineering	Y	<b>3</b>
EGR 530	Engineering Systems Design and Analysis	Y	<b>3</b>
EGR 535	Engineering Innovation and Entrepreneurship	Y	<b>3</b>



<b><u>Elective or Research Courses</u></b> (as deemed necessary by supervisory committee)			
<p>A minimum of 12 credit hours in the focus area, depending on whether the student chooses the capstone course-only option, the applied project option or the thesis option.</p> <ol style="list-style-type: none"> <li>1. If taking the capstone course-only option, the student will take 18 additional credit hours of course work, <b>12 of which will be in the focus area, a three credit hour capstone course and a three credit hour elective course.</b></li> <li>2. If taking the applied project option, the student will complete the <b>12 credit hours in the focus area, a three credit hour elective course, and a three credit hour applied project course.</b></li> <li>3. If taking the thesis option, the student will complete the <b>12 credit hours in the focus area and 6 credit hours of thesis.</b></li> </ol> <p>The degree curriculum requires a minimum 12 credit hour focus area selected by the student and advisor. Focus areas are flexible and may come from graduate level courses, both within and outside of the CTI, the student qualifies to take. We will offer some initial focus areas, selected from those shown below; in the degree startup and plan to expand these focus areas as the degree program matures.</p> <ul style="list-style-type: none"> <li>• Engineering for the Developing World</li> <li>• Sustainable Systems</li> <li>• Alternative Energy Systems</li> <li>• Engineering Innovation and Entrepreneurship</li> <li>• Mechatronics/Robotics</li> <li>• Manufacturing</li> <li>• Simulation and Modeling</li> </ul>			
<p><b>As an example, the Alternate Energy Systems focus area will draw from the following CTI courses.</b>  <b>Students select 4 courses (12 credit hours from the following courses).</b></p>			
(Prefix & Number)	(Course Title)	(New Course?) Yes or No?	(Insert Section Sub-total)
ALT 501	Advanced Renewable Energy Technology	3	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
ALT 545	Automotive and Stationary Fuel Cell Systems	3	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
ALT 502	Batteries for Portable Electronics	3	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
ALT 535	Applied Photovoltaics	3	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
ALT 515	Alternative Energy Reliability and Standards	3	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
ALT 507	Evaluation of Photovoltaic and Fuel Cell Systems	3	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
<p style="text-align: center;"><b><u>Culminating Experience</u></b>  <i>E.g. - Capstone course, applied project, <b>thesis (masters only – 6 credit hours) or dissertation (doctoral only – 12 credit hours) as applicable</b></i></p> <p>In keeping with the CTI approach to engineering education, all students will complete a project. However, the type of project will vary depending on the option selected by the student. Thus, one of the following options is required of all students.</p>			<b><u>Credit Hours</u></b> (Insert Section Sub-total)
EGR 599 Thesis (oral defense required)			<b>6</b>

EGR 593 Individual Applied Project (oral defense required) <i>Applied Project students will be expected to complete a written document, similar in format, but not length/complexity, as a thesis.</i>	<b>3</b>
EGR 570 Capstone course involving a project related to the student's focus area	<b>3</b>
<b><u>Other Requirements</u></b> <i>E.g. - Internships, clinical requirements, field studies as applicable</i>	<b><u>Credit Hours</u></b> (Insert Section Sub-total)
n/a	
<b>For doctoral programs</b> – when approved by the student's supervisory committee, will this program allow 30 credit hours from a previously awarded master's degree to be used for this program? If applicable, please indicate the 30 credit hour allowance that will be used for this degree program.	
<b>Total required credit hours</b>	<b>30</b>

- List all required core courses and total credit hours for the core (required courses other than internships, thesis, dissertation, capstone course, etc.).
- Omnibus numbered courses cannot be used as core courses.
- Permanent numbers must be requested by submitting a course proposal to Curriculum ChangeMaker for approval. Courses that are new, but do not yet have a new number can be designated with the prefix, level of the course and X's (e.g. ENG 5XX or ENG 6XX).

**6. Comprehensive Exams: Not applicable.**

**Master's Comprehensive Exam (when applicable), please select the appropriate box.**

**(Written comprehensive exam is required)**

- Oral comprehensive exam is required – in addition to written exam
- No oral comprehensive exam required - only written exam is required

- 7. Allow 400-level courses:**  **Yes**  **No** (No more than 6-credit hours of 400-level coursework can be included on a graduate student plan of study.)
- 8. Committee:** Required Number of Thesis or Dissertation Committee Members (must be at least 3 including chair or co-chairs): Three committee members, at a minimum, are required.
- 9. Keywords** (List all keywords that could be used to search for this program. Keywords should be specific to the proposed program.)

Engineering, alternative energy, manufacturing, sustainability, engineering systems, innovation, design, mechanical engineering, electrical engineering, projects, applied engineering, robotics, automation, photovoltaics, solar, engineering for the developing world, social entrepreneurship.

**From:** [Mitzi Montoya](#)  
**To:** [Scott Danielson](#)  
**Date:** Tue, 25 Sep 2012 18:35:39 -0700  
**Subject:** RE: MS in Engineering Proposal Approval  
**Attachment(s):** 0

Approved.

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Mitzi M. Montoya, PhD

Vice Provost, Arizona State University Polytechnic Campus

Dean, College of Technology & Innovation

7231 East Sonoran Arroyo Mall - Suite 330 Santan Hall

Mesa, AZ 85212

Tel: 480.727.1955

<http://technology.asu.edu> <<http://technology.asu.edu/>>

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What could your future <<http://www.asu.edu/myfuture/>> look like at ASU?

From: Scott Danielson  
Sent: Tuesday, September 25, 2012 6:31 PM  
To: Mitzi Montoya  
Cc: Chell Roberts  
Subject: MS in Engineering Proposal Approval

Dean Montoya,

I am asking for your approval on the attached proposal for a MS in Engineering to be offered in the College of Technology and Innovation at the Polytechnic campus. Your approval is needed before I can send the proposal forward to the Provost's office.

Your approval indicates that the proposal has been approved by the Department and College levels of review and the College has the resources to offer this degree program. Thus, you recommend implementation of the proposed degree program.

Thank you.

Scott Danielson, Ph.D., P.E.

Associate Dean for Academic Programs

College of Technology and Innovation

Arizona State University

480-727-1185

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**From:** James Collofello  
**Sent:** Thursday, September 27, 2012 10:40 AM  
**To:** Scott Danielson  
**Subject:** FW: MS in Engineering Proposal Impact Statement

Scott,

Our school does not have any concerns with the proposed Master of Science in Engineering to be offered in the College of Technology and Innovation at the Polytechnic campus.

jim

James S. Collofello  
Associate Dean of Academic and Student Affairs  
Professor of Computer Science and Engineering  
School of Computing Informatics and Decision Systems Engineering  
Ira A. Fulton Schools of Engineering  
Arizona State University

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**From:** Scott Danielson  
**Sent:** Friday, September 14, 2012 3:50 PM  
**To:** James Collofello  
**Subject:** MS in Engineering Proposal Impact Statement

Jim,

I am asking for your comment on the attached proposal for a Master of Science in Engineering to be offered in the College of Technology and Innovation at the Polytechnic campus. It is my understanding that our Deans reached agreement on our offering this degree in previous conversations.

Thank you.

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

**(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](mailto: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](mailto: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 the Graduate College 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](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](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 College Policies and Procedures website. Please go to [http://graduate.asu.edu/faculty\\_staff/policies](http://graduate.asu.edu/faculty_staff/policies) to access Graduate College Policies and Procedures.

**Check Box Directions** – To place an "X" in the check box, place the cursor on the left-side of the box, right click to open the drop down menu, select **Properties**, under **Default value**, select **Checked** and then select **Ok**.