

Distinctions & Directions

The Strategic Plan
School of Engineering and Applied Science
2009 – 2013



MIAMI
UNIVERSITY

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Revised: August 2009

“Distinctions and Directions”

The Strategic Plan for School of Engineering and Applied Science: 2009 – 2013

In the last decade, Miami University’s School of Engineering and Applied Science (SEAS) has undergone a deep transformation:

- from a school offering a few niche undergraduate programs and retraining graduate programs, focused nearly entirely on teaching and learning, and residing in substandard facilities;
- to a school that has made impressive progress on its way to offering a well-balanced spectrum of undergraduate and research-based graduate programs, places more emphasis on an improved research climate and increased faculty scholarly output, and occupies – on the Oxford campus - a new state-of-the-art complex.

While broadening our curriculum and increasing emphasis on faculty scholarship, we have made sure that we do not compromise Miami’s and our School’s focus on high-quality, student-centered education. To the contrary, to an ever-increasing extent, we have and will continue to ensure that our programs have a unique focus on integrating professional education with Miami’s strength in liberal arts aimed at educating the whole person, rather than training narrowly focused technical experts. In our School, over the last decade, we have moved from traditional education, relying on proficiency in specific engineering disciplines and rigid curricula, to a new paradigm of proficiency based on flexible and interdisciplinary curricula. We realize that our graduates have to function on multidisciplinary teams, communicate effectively, and engage in lifelong learning. We appreciate that they must understand their professional and ethical responsibilities, as well as the global and societal contexts of their professions.

In our commitment to this kind of broad education we are guided by our mission, which is to serve society by providing high-quality undergraduate and graduate education in the fields of computing, engineering, technology and nursing. We are committed to creating an environment for teaching, learning, and scholarship that is intellectually-stimulating, interactive, and innovative and in which our faculty, staff, and students realize their full potential.

While enjoying the fruits of our work, we clearly realize that the time has come to seize the positive momentum and take our School, over the next five years, to a new level. Hence, the Strategic Plan. Its title, Distinctions and Directions, reflects the realization that while we move in new Directions, we stay proudly connected to Miami’s heritage of Distinctions.

The central principles that drive the strategic plan are:

- A. to establish a new standard for excellence in undergraduate education of engineers, computer scientists, technologists and nurses,
- B. to increase enrollment and ensure student success, and
- C. to enhance SEAS distinction as a scholarly community and broaden and enhance graduate education.

The Central Principle A that drives the SEAS Strategic Plan is to set up a new standard for excellence in undergraduate education of engineers, computer scientists, technologists and nurses. The driving concept is consistent with our commitment to enriching already strong educational experiences of our students. We want to enable their success by promoting and executing five strategic initiatives.

The five strategic initiatives are related to our current, and, above all, future efforts in the areas of disciplinary, multidisciplinary, experiential, international and liberal arts experiences of our students. In all five cases, we will enhance existing and develop new opportunities for our students. By executing our plans, we will sharpen SEAS distinction in undergraduate education.

More specifically, we will:

- Enhance discipline-oriented SEAS programs (Initiative I),
- Promote interdisciplinary teaching and learning (Initiative II),
- Emphasize experiential learning (Initiative III),
- Develop a global presence (Initiative IV), and
- Enrich synergies between the liberal arts and professional education (Initiative V).

The Central Principle B that drives the Strategic Plan is to increase enrollment and ensure SEAS students' success by improving their retention rates and preparing them for successful careers. We strongly believe that by setting a new standard for excellence in undergraduate education of engineers, computer scientists, technologists and nurses (central principle A) will set the stage for attracting more students to SEAS, improving both first-to-second year and six-year retention rates and preparing them for successful careers in an increasingly global, diverse and technologically sophisticated society. However, additional initiatives (VI-VII) addressing directly this central principle are needed.

The Central Principle C that drives the Strategic Plan is to enhance SEAS distinction as a scholarly community and to broaden and enhance graduate education. This driving concept comprises our Strategic Initiatives VIII-IX.

The successful implementation of the strategic plan will require engaging key SEAS and MU constituents. Strategic Initiative X addresses this issue.

Strategic Initiative I: Enhancing discipline-oriented SEAS programs

Goal I.1. Broaden department-based SEAS programs

Original version – 10-13-08

Action	Target date	Oversight ¹
a. Implement Software Engineering major and transition Systems Analysis to Engineering Management	Fall '09 – Fall '12	CSA chair
b. Seek ABET accreditation of Software Engineering	ABET visit: Fall '12	CSA chair
c. Implement CIT courses in the IT concentration in Bachelor of Integrative Studies program	Fall '09	CIT chair
d. Evaluate current bachelor's degree programs and the need for additional bachelor's degree programs offered at the regional campuses, within the context of regional campus goals, and develop implementation plan	May '09	CIT, NSG and ENT chairs in consultation with MUM & MUH Associate Deans for Academic Affairs
e. Implement regional campus strategic initiatives identified above	To be determined	CIT, NSG and ENT chairs in consultation with MUM & MUH Academic Leadership

Overall measure of success: timely completion of the action plan and ABET accreditation of Software Engineering

¹ Oversight implies watchful supervision and should not be equated with the responsibility for executing an action, responsible individuals/committees/councils will be identified later.

Strategic Initiative I: Enhancing discipline-oriented SEAS programs

Goal I.1. Broaden department-based SEAS programs

Summer '09 revision

Action	Target date	Oversight ²
a. Implement Software Engineering major and transition Systems Analysis to Engineering Management	Fall '09 – Fall '12 (program ready for implementation)	CSA chair
b. Seek ABET accreditation of Software Engineering	ABET visit: Fall '12	CSA chair
c. Implement IT concentration in Bachelor of Integrative Studies program	AY 2008/09 (program ready for implementation)	CIT chair
d. Evaluate current bachelor's degree programs and the need for additional bachelor's degree programs offered at the regional campuses, focus on +2 BS (with Sinclair and Cincinnati State) in ENT and BS in CIT (action informed by a needs analysis for the region commissioned by MUH/MUM)	May '10	CIT, NSG and ENT chairs in consultation with MUM & MUH Associate Deans for Academic Affairs
e. Implement regional campus strategic initiatives identified above	To be determined	CIT, NSG and ENT chairs in consultation with MUM & MUH Associate Deans for Academic Affairs

Overall measure of success: timely completion of the action plan and ABET accreditation of Software Engineering

² Oversight implies watchful supervision and should not be equated with the responsibility for executing an action, responsible individuals/committees/councils will be identified later.

Strategic Initiative I: Enhancing discipline-oriented SEAS programs

Goal I.2. Meet high-quality standards at the national level

Original version – 10-13-08

Action	Target date	Oversight	Measures of success
a. Finalize preparations for Fall '10 ABET visit while advancing a culture of assessment and continuous improvement to strengthen compliance with ABET criteria regarding program educational objectives and outcomes (CSA, ECE, MME, PCE)	May '10 progress report: May '09	chairs and senior associate dean	six year accreditation of SEAS ABET-accredited programs
e. Finalize preparations for AY '09/10 Commission on Collegiate Nursing Education accreditation visit (for the RN-BSN & BSN programs) while advancing a culture of assessment and continuous improvement	May '09	NSG chair	CCNE accreditation of RN-BSN and BSN programs

Note: important developments in 2008-09

- Electrical Engineering – initial accreditation of EE and CE programs
- Chemical Engineering – initial accreditation visit in F'08, strong indication that accreditation will be granted
- NSG successful Ohio Board of Nursing visit in S'09 resulting in full approval of associate degree programs for the next 5 years
- Ultimate outcome of TAC/ABET 2007/08 accreditation cycle: accreditation to September 2014 of Electrical and Computer Engineering Technology (AS), Mechanical Engineering Technology (AS), Engineering Technology: Mechanical concentration (BS), Engineering Technology: Electro-Mechanical conc. (BS) programs

Strategic Initiative I: Enhancing discipline-oriented SEAS programs

Goal I.2. Meet high-quality standards at the national level

Summer '09 revision

Action	Target date	Oversight	Measures of success
a. Advance culture of assessment and continuous improvement to strengthen compliance with ABET criteria regarding program educational objectives and outcomes (CSA, ECE, MME, PCE, CIT)	Ongoing, progress reports every Spring	chairs and senior associate dean	six year accreditation of SEAS ABET-accredited programs
b. Finalize preparations for Fall '10 ABET visit (CSA, ECE, MME, PCE)	June '10	chairs and senior associate dean	six year accreditation of SEAS ABET-accredited programs
c. Finalize preparations for AY '09/10 Commission on Collegiate Nursing Education accreditation visit (for the RN-BSN & BSN programs) while advancing a culture of assessment and continuous improvement	Done	NSG chair	CCNE accreditation of RN-BSN and BSN programs
d. Conduct the Commission on Collegiate Nursing Education (CCNE) and Ohio Board of Nursing (OBN) visits	AY 2009/10	NSG chair	CCNE and OBN accreditation of RN-BSN and BSN programs

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.1. Enhance first year experience of SEAS students

Original version – 10-13-08

Action	Target date	Responsibility
a. Revisit EAS 101 content and focus on discovery, writing, team work and ethics	May '09	EAS 101 coordinator and instructors
b. Revisit EAS 102 content and focus on problem solving, design and hands-on, team-based lab projects	Dec. '09	EAS 102 coordinator and instructors
c. Build stronger connections between SEAS common courses, such as EAS 101 and 102, and Physics, Chemistry and Math courses	on-going; progress report Dec. '09	tbd

Overall measure of success: Improve first-to-second year retention by 2% each year (F'09 – F'13)

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.1. Enhance first year experience of SEAS students

Summer '09 revision

Action	Target day	Oversight
a. Revisit EAS 101 content while focusing on discovery, writing, team work and ethics	On-going; started fall 08; comprehensive report May '10	EAS 101 academic coordinator
b. Convert one section of EAS 101 to an Honors section	done; implementation fall 09	EAS 101 academic coordinator
c. Monitor EAS 101 student-learning outcomes and student evaluations	On-going; progress report every spring	EAS 101 academic coordinator
d. Monitor retention from EAS 101 to 102, and from 101 to graduation	On-going; progress report every spring	EAS 101 academic coordinator and SEAS assistant dean
d. Delineate duties and responsibilities of and interactions between EAS 101 and 102 academic coordinators and SEAS Assistant Dean in our collective attempts to enhance SEAS First Year Experience	October '09	EAS 101/102 academic coordinators and SEAS assistant dean
e. Revisit EAS 102 content while focusing on problem solving, design and hands-on, team-based lab projects	On-going; starts Fall '09; progress report May '10, comprehensive report May '11	EAS 102 academic coordinator
f. Name SEAS coordinator of interdisciplinary courses and programs whose responsibilities will include oversight of SEAS first year experience	May '11	dean
g. Build stronger connections between SEAS common courses, such as EAS 101 and 102, and Physics, Chemistry and Math courses	2011/12 and beyond	SEAS Coordinator

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.2. Make central the role of interdisciplinary programs in SEAS

Original version – 10-13-08

Action	Target date	Oversight
a. Revise SEAS governance to support operation and coordination of interdisciplinary courses and programs	Dec. '09	Oxford chairs and senior associate dean
b. Identify resources to support the operation and coordination of interdisciplinary courses and programs	Dec. '09	Oxford chairs and senior associate dean
c. Secure resources to support the operation and coordination of interdisciplinary courses and programs	May '10	dean
d. Name a coordinator of interdisciplinary courses and programs	May '10	dean

Overall measure of success: timely completion of the action plan

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.2. Make central the role of interdisciplinary programs in SEAS

Summer '09 revision

Action	Target date	Oversight
a. Revise SEAS governance to support operation and coordination of interdisciplinary courses and programs	AY 2010/11 ³	Oxford chairs and senior associate dean
b. Identify resources to support the operation and coordination of interdisciplinary courses and programs	May '11	Oxford chairs and senior associate dean
c. Secure resources to support the operation and coordination of interdisciplinary courses and programs	May '11	dean
d. Name a coordinator of interdisciplinary courses and programs	May '11	dean

Overall measure of success: timely completion of the action plan

³ The delays in executing the action plan result from financial constraints and personnel developments not anticipated a year ago when the strategic plan was developed.

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.3. Enhance Engineering Management program

Original version – 10-13-08

Action	Target date	Oversight
a. Implement recently approved Systems Analysis track	Fall '09	CSA chair in consultation with EGM Steering Committee
b. Establish ASEM chapter	May '09	EGM Steering Committee
c. Respond to the recommendations of the AY '08/09 program review	AY '09/10	EGM Steering Committee
d. Strengthen connections among engineering, computing and business requirements	on-going; progress report December 2009	EGM Steering Committee and MGT department
e. Develop, seek approval for and implement new ECE track	Fall '10	ECE chair & EGM Steering Committee
f. Revisit desirability and likelihood of ABET accreditation	May '11	Coordinator of interdisciplinary programs

Overall measure of success: timely completion of the action plan

Note: important development in 2008/09:

Successful completion of Miami's Academic Engineering Management Program Review

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.3. Enhance Engineering Management program

Summer '09 revision

Action	Target day	Oversight
a. Implement recently approved Systems Analysis track	Fall '09	CSA chair in consultation with EGM Steering Committee
b. Establish ASEM chapter	AY 2009 / 10	EGM Steering Committee
c. Respond to the recommendations of the 2008/09 APRC	AY 2009/ 10	EGM Steering Committee
d. Strengthen connections among engineering, computing and business requirements including business core, MGT electives, and MGT minors	On-going; progress report December 2009	EGM Steering Committee and MGT department
e. Revisit FE related issues including ENV track content	Fall 2009	EGM Steering Committee
f. Address curricula related issues, such as Global Miami Plan and its impact on ECO 201/202, CSA Ethics course, and EGM designation for such courses as MME/PCE 341.	AY 2009 / 2010	EGM Steering Committee
g. Develop, seek approval for and implement new ECE track	Fall 2010	ECE chair & EGM Steering Committee
h. Revisit desirability and likelihood of ABET accreditation	May 2011	Coordinator of interdisciplinary programs

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.4. Offer new major in Bioengineering

Original version – 10-13-08

Action	Target date	Oversight
a. Develop a broad interdisciplinary major in Bioengineering	Dec. '08	PCE chair
b. Secure approval for the major	May '09	PCE chair and SEAS dean
c. Implement the major	Fall '10	PCE chair
d. Seek ABET accreditation of the major	ABET visit: Fall '13	PCE chair

Overall measures of success: Recruitment of 25 students each year and ABET accreditation of the program

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.4. Offer new major in Bioengineering

Summer '09 revision

Action	Target date	Oversight
a. Develop a broad interdisciplinary major in Bioengineering	Done	PCE chair
b. Secure approval for the major	Done	PCE chair and SEAS dean
c. Implement the major	Fall '10	PCE chair
d. Seek ABET accreditation of the major	ABET visit: Fall '13	PCE chair

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.5. Develop a strong presence in computational science and engineering at the undergraduate level

Original version – 10-13-08

Action	Target date	Oversight
a. Develop overall program outcomes for a minor in CSE	Dec. '08	Oxford chairs and associate dean for research & grad. studies
b. Develop and seek approval for the minor in CSE	May '09	Oxford chairs and associate dean for research & grad. studies
c. Become a member of Ralph Regula School of Computational Science	May '09	associate dean for research & grad. studies
d. Implement the minor in CSE, including developing needed new undergraduate courses to support the minor in CSE	Dec. '09	CSA chair

Overall measure of success: timely completion of the action plan

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.5. Develop a strong presence in computational science and engineering (CS&E) at the undergraduate level

Summer '09 revision

Action	Target date	Oversight
a. Develop overall program outcomes for a minor in CSE	Done	Oxford chairs and associate dean for research & grad. studies
b. Develop and seek approval for the minor in CSE	Done	Oxford chairs and associate dean for research & grad. studies
c. Become a member of Ralph Regula School of Computational Science	Done	associate dean for research & grad. studies
d. Implement the minor in CS&E, including developing needed new undergraduate courses to support the minor	Dec. '09	CSA chair

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.6. Strengthen General Engineering program

Original version – 10-13-08

Action	Target date	Oversight
a. Conduct an analysis of strengths and weaknesses of the General Engineering program	Dec. '08	Chair of GE Steering Committee
b. Develop a plan to strengthen the program	May '09	Chair of GE Steering Committee
c. Begin implementing recommendations of the plan	AY '09/10	Chair of GE Steering Committee
c. Implement fully the recommendations of the plan	Fall '10	Coordinator of interdisciplinary programs

Overall measure of success: timely completion of the action plan

Progress report – Summer '09

RE a, b: completed

RE c: b: Secure approval for the major – done in a timely fashion

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.6. Strengthen General Engineering program

Summer '09 revision

Action	Target date	Oversight
a. Conduct an analysis of strengths and weaknesses of the General Engineering program	Done	Chair of GE Steering Committee
b. Develop a plan to strengthen the program	Done	Chair of GE Steering Committee
c. Discuss recommendations of the General Engineering Steering Committee and develop an implementation plan	AY '09/10	Dean and Oxford Leadership Council
d. Begin implementing recommendations of the implementation plan	Fall '10	tbd
e. Implement fully the recommendations of the plan	Fall '11	Coordinator of interdisciplinary programs

NEW IN 2009/10!!!

Strategic Initiative II: Promoting interdisciplinary teaching and learning

Goal II.7.

Develop strong SEAS presence within University Energy Initiative and prepare SEAS for playing a leading role in the energy field at Miami

Action	Target date	Oversight
a. Develop and Teach Energy-Related Courses in an Energy Curriculum Three courses are under development: (1) Miami Plan Foundation Course: ENV 2xx Energy Policy (2) ECE 291 Energy Systems Engineering (3) ECE 491 Power Systems Engineering	Spring '10 Spring'10 Fall '09	C.S. Chen
b. Develop action plan for 2010/11 and beyond .	August '10	C.S.Chen

Strategic Initiative III: Emphasize experiential learning

SEAS will emphasize experiential learning opportunities for all students. These opportunities can be categorized as follows:

1. *External to, but integrated with, SEAS academic programs,*
2. *Others, discussed elsewhere in this document*
3. *Integral to academic programs*

Category 1: Experiential learning opportunities external to, but integrated with, SEAS academic programs

They include, but are not limited to:

- *Cooperative education*
- *Internships*
- *Community, public, and/or professional service*
- *Leadership training*
- *Ethics / diversity / environmental training*
- *Business incubator, entrepreneurship, intellectual property possibilities*

Category 2: Other experiential learning opportunities addressed elsewhere in this report

- *Study abroad (see Strategic Initiative IV)*
- *Undergraduate research (see Strategic Initiative VIII)*

Category 3: Experiential learning opportunities integral to SEAS academic programs

They include, but are not limited to:

- *Project-based learning*
- *Team work*
- *Laboratory experiences*
- *Hands-on learning in courses*
- *Senior design projects*
- *Clinical training*

Please note: Strategic initiative III encompasses opportunities belonging to category 1 only. Opportunities belonging to category 3 are addressed in Strategic Initiative VII.

Strategic Initiative III: Emphasizing experiential learning

Goal III.1. Offer a broad range of opportunities for student participation in experiential learning activities

Original version – 10-13-08

Action	Target date	Oversight	Measures of success
a. Create an inventory of past (since Fall 2004) and current (AY 2008/09) experiential learning opportunities (EPOs)	Dec. '08	chairs; dean's office (Oxford); appropriate offices at MUM/MUH	timely completion of the project
b. Prepare to offer a broader range of experiential learning opportunities in AY 09/10	May '09	chairs; dean's office (Oxford); appropriate offices at MUM/MUH	x% increase of EPOs in AY 09/10 (x – tbd by Dec. '08)
c. Broaden experiential learning opportunities	on-going	chairs; dean's office (Oxford); appropriate offices at MUM/MUH	see overall measure of success below the table

Overall measure of success: Each member of SEAS 2013 Class will have an experiential learning experience (including international and undergraduate research experience)

Progress report

Experiential learning survey of 445 students conducted, strengths and weaknesses identified, short- and long-term goals developed

Strategic Initiative III: Emphasizing experiential learning

Goal III.1. Offer a broad range of opportunities for student participation in experiential learning activities

Summer '09 revision

Action	Target date	Oversight	Measures of success
a. Experiential learning survey conducted, strengths and weaknesses identified, short- and long-term goals developed	Done	Chair of the experiential learning committee	timely completion of the project
b. Broaden experiential learning opportunities	on-going, progress report May '10	chairs; dean's office (Oxford); appropriate offices at MUM/MUH	x% increase of EPOs in AY 10/11 (compared to AY 08/09) (x – tbd by May '10) see also: overall measure of success below the table

Overall measure of success: Each member of SEAS 2014 Class will have an experiential learning experience (including international and undergraduate research experience)

Strategic Initiative III: Emphasizing experiential learning

Goal III.2. Integrate, in a unique way, academic programs and experiential learning opportunities

Original version – 10-13-08

Action	Target date	Oversight
a. Define expected learning outcomes associated with experiential learning activities	Dec. '08 (departments) May '09 (SEAS)	chairs senior assoc. dean
b. Assure that experiential learning become a key element in the educational strategies established by each SEAS department/academic program	Dec. '09	chairs
c. Analyze inclusion of experiential learning into curricular requirements established by each SEAS department/academic program	May '10	chairs; senior associate dean
d. Finalize integration of experiential learning into SEAS academic programs	May '11	SEAS leadership

Overall measure of success: timely completion of the action plan

Strategic Initiative III: Emphasizing experiential learning

Goal III.2. Integrate, in a unique way, academic programs and experiential learning opportunities

Summer '09 revision

Action	Target date	Oversight
a. Define expected learning outcomes associated with experiential learning activities	Dec. '09 (departments) May '10 (SEAS)	chairs senior assoc. dean
b. Assure that experiential learning become a key element in the educational strategies established by each SEAS department/academic program	May '11	chairs
c. Analyze inclusion of experiential learning into curricular requirements established by each SEAS department/academic program	May '11	chairs; senior associate dean
d. Finalize integration of experiential learning into SEAS academic programs	May '12	SEAS leadership

Overall measure of success: timely completion of the action plan

Strategic Initiative IV: Developing global presence

Goal IV.1. Create opportunities for global engagement

Original version – 10-13-08 (no revision in Summer '09)

Action	Target date	Oversight	Measures of success
a. Build partnerships and alliances with foreign universities	ongoing	chairs and dean	8 active exchange programs established by May '12
b. Engage with non-governmental organizations and related agencies	ongoing	chairs and dean	x% of Class 2013 graduates have experience related to NGO activities x – tbd by May '10
d. Promote and support faculty international travel	ongoing	dean	tbd by May '09
d. Develop engineering and computing offerings in cooperation with MUDEC that satisfy the Global Miami Plan (cross listed with V.3)	tbd	tbd	tbd
e. Advance the cause of international student enrollment	ongoing	assistant dean, chairs	x% increase in enrollment each year x – tbd by May '09

Overall measure of success: timely completion of the action plan

Strategic Initiative IV: Developing global presence

Goal IV.2. Enhance globalization component of undergraduate curriculum

Original version – 10-13-08 (no revision in Summer '09)

Action	Target date	Oversight	Measures of success
a. Implement and advocate Miami global plan	ongoing	chairs	40% of Class 2013 graduates elect Option A of MPF III
b. Create a database of previous global education opportunities (global coops and internships, study abroad programs, summer research abroad, projects under the auspices of Engineering without Borders	Dec. '09	chairs, dean's office	timely completion of the project
c. Define expected learning outcomes associated with global education in all undergraduate BS programs	May '10	Senior associate dean	timely completion of the project
d. Broaden global opportunities for our students	ongoing	SEAS leadership	see below

Overall measure of success: x% of Class 2014 graduates (Oxford vs. MUM/MUH?) will have global experience (x tbd by May '10)

Strategic Initiative V: Enriching synergies between liberal arts and professional education

Goal V.1. Create closer bonds with Honors & Scholars Programs

Original version 10-13-08

Action	Target date	Responsibility
a. Create an honors section in EAS 101	May '09	EAS 101 coordinator and instructors
b. Revisit one or more of the previously developed MME and CSA honors courses	May '09	Oversight: CSA and MME Chair
c. Create honors section in EAS 102	May '10	EAS 102 coordinator and instructors
d. Create SEAS Honors & Scholars Council and link it to University Honors and Scholars Program	Dec. '09	tbd

Overall measure of success: timely completion of the action plan

Strategic Initiative V: Enriching synergies between liberal arts and professional education

Goal V.1. Create closer bonds with Honors & Scholars Programs

Summer '09 revision

Action	Target date	Responsibility
a. Create an honors section in EAS 101	Done. Start offering in Fall '09	EAS 101 coordinator and instructors
b. Revisit one or more of the previously developed MME and CSA honors courses	Fall '09	Oversight: CSE and MME Chair
c. Create honors section in EAS 102	Undergoing; preliminary proposal Fall '09	EAS 102 coordinator and instructors
d. Create SEAS Honors & Scholars Council and link it to University Honors and Scholars Program	Spring 2010	EAS 101 & 102 coordinators in consultation with SEAS chairs

Overall measure of success: timely completion of the action plan

Strategic Initiative V: Enriching synergies between liberal arts and professional education

Goal V.2. Contribute to the liberal arts core curriculum (Miami plan) of the university

Original version 10-13-08

Action	Target date	Responsibility
a. Develop a plan determining SEAS future contributions to the liberal arts core curriculum (Miami plan); listed below are preliminary suggestions (1-5) identified as part of the strategic planning process	AY 2009/10 AY 2010/11 ⁴	SEAS leadership
1. Adjust EAS 101 & 102 to become Miami Plan foundation V courses		
2. Develop a SEAS interdisciplinary thematic sequence that starts with EAS 101 & EAS 102 and includes MTH, PHY and / or CHM courses		
3. Develop a SEAS Diversity Capstone – link to the CSA existing one		
4. Develop innovative technology and computing courses that satisfy Miami Plan Foundation requirements		
5. Develop technology and computing Miami Plan Thematic sequences		

Overall measure of success: timely completion of the action plan

⁴ Developing the plan has been delayed till AY 2010/11

Strategic Initiative V: Enriching synergies between liberal arts and professional education

Goal V.3. Contribute to the enhancement of computer and technological literacy of Miami students

Original version 10-13-08

Action	Target date	Responsibility	Measures of success
a. Implement and refine the CSA Top 25 computer literacy course for Business majors	Aug '08 first offering; May '09 target for assessment	CSA Top-25 committee and MU Office of Liberal Education	Critical thinking and engagement metrics developed with MU Office of Lib. Education
b. Implement and refine computer literacy courses for other majors, e.g. CSA 141	Jan '09 first offering	CSA Top-25 committee and MU Office of Liberal Education	Critical thinking and engagement metrics developed with MU Office of Lib. Education
c. Develop innovative and interdisciplinary minors (e.g., Digital Game Development with IMS)	May '09	CSA undergraduate committee	Student enrollment in courses
d. Develop engineering and computing offerings in cooperation with MUDEC that satisfy the Global Miami Plan (cross listed with IV.1)	tbd	tbd	tbd

Strategic Initiative V: Enriching synergies between liberal arts and professional education

Goal V.3. Contribute to the enhancement of computer and technological literacy of Miami students

Summer '09 revision

Action	Target date	Responsibility	Measures of success
a. Implement and refine the CSE Top 25 computer literacy course CSA 148 for Business majors	Done	CSE Top-25 committee and MU Office of Liberal Education	Critical thinking and engagement metrics; Assessment by B. School of students entering DSC235
b. Implement and refine computer literacy courses for other majors, e.g. CSA 141; Monitor enrollment of CSA 141 to determine whether it needs to be offered in long term.	Done	CSE Top-25 committee and MU Office of Liberal Education	Critical thinking and engagement metrics developed with MU Office of Lib. Education
c. Develop innovative and interdisciplinary minor in Digital Game Development with IMS)	Done	CSE undergraduate committee	Student enrollment in courses
d. Develop other innovative and interdisciplinary minors (CSE and CIT)	May '10	CSE and CIT Chairs	
e. Develop computing offerings in cooperation with MUDEC that satisfy the Global Miami Plan (cross listed with IV.1)	Aug '10	CSE chair, MUDEC dean, and Uni Lux dean and computer science faculty	Viability and practicality for MUDEC students to enroll in Uni Lux courses
f. Develop and offer web-based version of CSA 148 in the summer	May '10	CSA148 Coordinator	Compare critical thinking and engagement metrics with traditional course offerings

Strategic Initiative VI: Increasing SEAS enrollment

Goal VI.1. Increase SEAS Oxford enrollment

No significant revision in Summer '09 (next progress report due May '10)

Action	Target date	Oversight
a. Connect with Admissions to enact ideas that generate greater numbers of applications for admission into SEAS majors	ongoing; progress report: May '09	assistant dean
b. Work with Miami's University Communications group to develop a consistent branding and marketing strategy for SEAS	ongoing; progress report: May '09	assistant dean, assistant to the dean
c. Enhance our Web presence	ongoing; progress report: May '09	assistant dean, assistant to the dean, IT manager
d. Enhance communications content and boost frequency of contact between SEAS (Dean's Office and departments) and applicants, with an eye toward increasing yield	ongoing; progress report: May '09	assistant dean, chairs
e. Create experiential opportunities for prospective students during visits to SEAS to drive up interest in applying and committing to SEAS at Miami	ongoing; progress report: May '09	assistant dean, chairs
f. Develop the "pre-engineering" regional campus program to ensure that relocating students have their foundational courses completed before coming to Oxford.	ongoing; progress report: May '09	ENT chair

Measure of continuing success:

Increase the number of first year students by 6% each year (F'09 – F'12)

Overall measure of success:

Increase SEAS Oxford enrollment to at least 1050 undergraduate students by F'13

Strategic Initiative VI: Increasing SEAS enrollment

Goal VI.2. Increase enrollments in SEAS majors at the regional campuses

Original version 10-13-08

To be revised in September 2009

Action	Target date	Oversight	Measures of success
a. Work with the Admissions offices (and other appropriate departments) at the regional campuses to develop a plan that includes targets for increased enrollment in SEAS majors (associate and bachelors), with special emphasis on CIT and ENT programs.	ongoing; progress report: May '09	CIT, ENT and NSG chairs and others determined by regional campus Deans	Increased enrollments that meet or exceed the targets.
b. Work with the marketing departments on each regional campus to develop a marketing strategy and consistent publications supporting SEAS programs, that are also integrated with the overall marketing strategy of the regional campuses.	ongoing; defined strategy and specified publications March '09	CIT, ENT and NSG chairs and others determined by regional campus Deans	Consistent marketing and publication materials.
c. Work with the appropriate offices at each regional campus to increase experiential learning opportunities and participation of SEAS majors at the regional campuses and publicize success stories to assist in recruitment of additional majors to SEAS programs at the regional campuses.	Ongoing; status report end of each academic year	CIT and ENT chairs, co-op offices (MUH and MUM), others determined by regional campus Deans	Increased participation; publication and dissemination of success stories.
d. Integrate regional campus activities for Pre-engineering program with Goal VI.1 action e.	ongoing	ENT chair; SEAS Oxford assistant dean	Increase in the number of students relocating to Oxford in engineering majors.

Strategic Initiative VII: Ensuring student success

Goal VII.1. Improve SEAS first-to-second year retention on the Oxford campus

No significant revision in Summer '09 (next progress report due May '10)

Action	Target date	Oversight
a. Create a “Big Sibling” program that connects first-year students with upper-class SEAS students.	ongoing; progress report: May '09	assistant dean
b. Utilize Tau Beta Pi and the Dean’s SAC, in collaboration with Physics and Math Departments and SEAS faculty advisors, to arrange help sessions for students in the math and science foundational courses.	ongoing; progress report: May '09	assistant dean
c. Mandate advising/”discussion of experiences” sessions for first-year students each semester so that concerns can be addressed before they become problems.	ongoing; progress report: May '09	tbd

Measure of continuing success:

Improve first-to-second year retention by 2% each year (F'09 – F'13)

Overall measure of success:

Improve SEAS first-to-second year retention on the Oxford campus to about 88% in F'13

Strategic Initiative VII: Ensuring student success

Goal VII.2. Increase six-year graduation rate on the Oxford campus

No significant revision in Summer '09 (next progress report due May '10)

Action	Target date	Oversight
a. Proactively connect at-risk students with academic assistance and advising to minimize the likelihood of academic action against them (suspension, dismissal).	Initiate F'09; ongoing; progress report: May 2009	assistant dean
b. Review the proximity-to-graduation status of a student cohort after three years to address individual students with "red flags", such as low major GPA or Thematic Sequence issues.	Initiate F'09; ongoing; progress report: May 2009	assistant dean

Overall measure of success:

Increase six-year graduation rate on the Oxford campus to about 80% in F'13

Strategic Initiative VII: Ensuring student success

Goal VII.3. Prepare students for successful careers

No significant revision in Summer '09 (next progress report due May '10)

Action	Target date	Oversight
a. Interview students at the start of their fourth year to gauge career aspirations and preparedness, and ensure that they are aware of their options and are empowered to progress toward those endpoints (could possibly be part of Senior Capstone experience).	ongoing; progress report: May '09	assistant dean
b. Strongly encourage participation in fall Career Fair and Career Services workshops so that students understand how the job search process works.	ongoing; progress report: May '09	assistant dean
c. Require a pre-exit interview in December of students' senior year to assess their post-graduation planning.	ongoing; progress report: May '09	assistant dean
d. Increase the breadth of industries available to students upon graduation	ongoing; progress report: May '09	tbd
e. Encourage SEAS undergraduate students to apply to renowned graduate schools	ongoing; progress report: May '09	chairs, assistant dean
f. Enhance experiential learning opportunities integral to SEAS academic programs, such as project-based learning, team work, laboratory experiences, hands-on learning in courses, senior design projects	ongoing; progress report: May '10	chairs

Overall measures of success:

Place 100% of SEAS students in permanent job positions or graduate schools within six months from graduation

Increase the number of undergraduate students admitted to graduate schools

Strategic Initiative VIII. Enhancing SEAS distinction as a scholarly community

Goal VIII.1. Increase research productivity and quality

No significant revision in Summer '09 (next progress report due May '10)

Action	Target date	Oversight	Measures of success
a. Increase the number of peer-reviewed publications	On-going; Progress report: June each year	Assoc. Dean for Research/Grad. Studies	From ~75 refereed articles/year to ~85 refereed articles/year, an average of ~2 refereed articles per faculty member per year for the Oxford campus. For MUM and MUH, the goal will be established.
b. Increase the number of submitted quality proposals for external funding	On-going; Progress report: June each year	Assoc. Dean for Research/Grad. Studies	Form ~58 per year to ~66 per year or an average of ~1.5 per faculty member on the Oxford campus.
c. Consistently submit equipment grants	On-going; Progress report: June each year	Assoc. Dean for Research/Grad. Studies	At least 4 equipment grants from SEAS per year; at least 1 from each Oxford dept.
d. Consistently submit curriculum, scholarship, or pedagogy-related proposals	On-going; Progress report: June each year	Assoc. Dean for Research/Grad. Studies	At least 2 proposals per year in Oxford and 2 at MUH/MUM.
e. Establish expectations related to publishing articles based on MS research	On-going; Progress report: June each year	Assoc. Dean for Research/Grad. Studies	Each Master's degree student thesis should result in a submission of a research paper to a journal or conference.
f. Establish expectations regarding quality of publishing venues	May '09 May '10	Assoc. Dean for Research/Grad. Studies	Each department will established criteria to judge the quality of publishing venues.

Strategic Initiative VIII. Enhancing SEAS distinction as a scholarly community

Goal VIII.2. Enhance support for research

No significant revision in Summer '09 (next progress report due May '10)

Action	Target date	Oversight	Measures of success
a. Secure financial support for graduate students (Research Assistants)	On-going; Progress report: June each year	Assoc. Dean for Research/Grad. Studies	Fund at least 4 students in each Oxford department each year via external grants
b. Secure funding (external and internal) for research associate positions in SEAS	On-going; Progress report: June each year	Assoc. Dean for Research/Grad. Studies	Fund at least 4 positions each year, at least one per Oxford department
c. Secure funding, on a per project basis, for a technical writer to help write research grants.	On-going; Progress report: June each year	Assoc. Dean for Research/Grad. Studies	An average of 4 grants are facilitated each year in SEAS departments
d. Have at least one research center housed in SEAS	AY '11/12	Assoc. Dean for Research/Grad. Studies	A research center is established with an ongoing agenda of research activities
e. Establish an ongoing colloquium series to bring in high profile researchers in areas related to the SEAS research clusters.	AY '09/10	Assoc. Dean for Research/Grad. Studies	Each Oxford department has at least one outside speaker per year.
f. Promote undergraduate research	On-going	Assoc. Dean for Research/Grad. Studies	Each Oxford department has established a baseline by spring '09. The number of undergraduate students involved in research is increased by 33% by AY '11/12.

Strategic Initiative IX. Broadening and enhancing graduate education in SEAS

Goal IX.1. Enhance our presence in graduation education within the confines of current MS programs

Original version 10-13-08

Action	Target date	Oversight	Measures of success
a. Implement new Computational Science and Engineering MS degree	Fall '09	Assoc. Dean for Research/Grad. Studies	By AY '12/13, 7 graduates for the CSE program each year.
b. Increase the number of GA positions for MS students	Fall '09	Assoc. Dean for Research/Grad. Studies	From 22 (AY '08/09) to 30 (AY '09/10) to 40 (AY '12/13)
c. Increase the number of RA positions funded from external grants	On-going; Progress report: June each year	Assoc. Dean for Research/Grad. Studies	Each department will have at least 4 RA positions funded from external grants.

Strategic Initiative IX. Broadening and enhancing graduate education in SEAS

Goal IX.1. Enhance our presence in graduation education within the confines of current MS programs

Summer '09 revision

Action	Target date	Oversight	Measures of success
a. Implement new Computational Science and Engineering MS degree	done	Assoc. Dean for Research/Grad. Studies	By AY '12/13, 7 graduates for the CSE program each year.
b. Increase the number of GA positions for MS students	Fall'10	Dean	From 22 (AY '09/10) to 26 (AY '10/11) to 30 (AY '11/12)
c. Increase the number of RA positions funded from external grants	On-going; Progress report: June each year	Assoc. Dean for Research/Grad. Studies	Each department will have at least 4 RA positions funded from external grants.

Strategic Initiative IX. Broadening and enhancing graduate education in SEAS

Goal IX.2. Broaden our presence in graduation education beyond existing programs

No significant revision in Summer '09 (next progress report due May '10)

Objectives	Target date	Oversight	Measures of success
Develop collaborative agreements with other schools (especially those in Ohio, but including even those in other countries) so that faculty can advise PhD students	June '10	Assoc. Dean for Research/Grad. Studies	SEAS faculty working with 4 PhD students from other schools each year.
Develop collaborative agreements with other Ohio schools to share courses (via the web)	June '10	Assoc. Dean for Research/Grad. Studies	SEAS offering 2 online courses each year.
Develop niche MS programs in MME and ECE in collaboration with the institution with whom we develop collaborative agreements	AY '10/11	Assoc. Dean for Research/Grad. Studies and MME/ECE chairs	An MS program PDP developed and approved in niche areas of both MME and ECE.

Strategic Initiative X. Engaging key SEAS and MU constituents in the implementation of the strategic plan

Goal X.1. Develop a “Strategic Plan for SEAS Development: 200910-2013” in support of the initiatives and goals of the “Strategic Plan for SEAS: 2009-2013”, target date: May’09 ‘10, responsible person: SEAS Development Officer

Goal X.2. Develop a “Strategic Plan for SEAS IT: 200910-2013”, target date: May’09, May’10; responsible person: SEAS IT Manager

~~Goal X.3. Identify external consultants (at and outside Miami) and engage them in preliminary discussions: Assistant to the Dean and Assistant Dean, in consultation with SEAS Dean and University Communications~~

Goal X.3. Develop a “Strategic Plan for SEAS Branding and Marketing: 2010-13”; responsible person: Assistant to the Dean

Goal X.4. Modify the structure of the dean’s office to efficiently use central SEAS administration to meet the goals of the strategic plan; target date: May’10 ‘11; responsible person: SEAS Dean

Goal X.5 Identify and secure resources to support the implementation of strategic initiatives II-VIII for AY 2010/11, 2011/12, 2012/13, 2013/14; target date: May’10; ‘11; responsible person: SEAS Dean