Board of Trustees
Educational Programs Committee
July 25, 2013
10:00 a.m. – 10:45 a.m.
Live Oak Center
Conference call-in phone #800-442-5794, passcode 463796

AGENDA

I. CALL TO ORDER — Robert Garvy, *Chair, Educational Programs Committee*

II. ROLL CALL — Susan Foisy, *Senior Administrative Assistant to the Executive Vice Provost*

III. NEW BUSINESS — Chair Garvy

- Conferral of Degrees (approval) (EPC-1) — Tony Waldrop, *Provost and Executive Vice President*

- 2011-12 Academic Program Review Recommendation Implementation Status (INFO-1) — Michael Georgiopoulos, *Dean of the College of Engineering and Computer Science*
  - Civil Engineering, B.S.C.E., M.S.C.E., M.S., Ph.D.
  - Construction Engineering, B.S.Con.E.
  - Environmental Engineering, B.S.V.E., M.S.V.E., M.S., Ph.D.
  - Computer Science, B.S., M.S., Ph.D.
  - Digital Forensics, M.S.
  - Information Technology, B.S.
  - Computer Engineering, B.S.Cp.E., M.S.Cp.E., Ph.D.
  - Electrical Engineering, B.S.E.E., M.S.E.E., Ph.D.
  - Industrial Engineering, B.S.I.E., M.S., M.S.I.E., Ph.D.
  - Aerospace Engineering, B.S.A.E., M.S.A.E.
  - Materials Science and Engineering, M.S.M.S., Ph.D.
  - Mechanical Engineering, B.S.M.E., M.S.M.E., Ph.D.

- Annual external research funding update — M. J. Soileau, *Vice President for the Office of Research and Commercialization*

- Provost's update — Tony Waldrop

IV. OTHER BUSINESS

University of Central Florida

Board of Trustees
Educational Programs Committee
May 23, 2013
Live Oak Center
Conference call-in #800-442-5794, passcode 463796

MINUTES

CALL TO ORDER

Trustee Robert Garvy, chair of the Educational Programs Committee, called the meeting to order at 8:45 a.m. Committee members Beverly Seay, Reid Oetjen, and Richard Crotty were present. Committee member Ray Gilley attended via teleconference. Board of Trustees chair Michael Grindstaff was present. Garvy welcomed new committee members Oetjen and Seay.

MINUTES

The minutes from March 21, 2013, were approved as written.

NEW BUSINESS

Equity Accountability Program

Tony Waldrop, Provost and Executive Vice President, presented the university's Florida Equity Report 2013, an annual report that analyzes the effectiveness of selected programs supporting equity in enrollment, gender equity in athletics, and faculty employment. Waldrop reported favorable results in all areas and acknowledged Janet Balanoff, Director of Equal Opportunity and Affirmative Action Programs, for her efforts in preparing the subject report. A motion to recommend the Florida Equity Report 2013 was approved.

2012-13 Tenure Recommendations

Waldrop reviewed the promotion and tenure process. During this year's promotion and tenure process, President Hitt and Waldrop reviewed tenure applications and recommended that twenty-four candidates be approved for tenure. Trustee Oetjen abstained from voting on tenure involving a faculty member in his department for whom he had previously submitted a vote. A motion to recommend the 2013 tenure recommendations was approved.

UCF 2013-14 Work Plan

Paige Borden, Assistant Vice President for Institutional Knowledge Management, reviewed an update of UCF's multi-year Work Plan that will be presented in June to the Florida Board of Governors. Waldrop acknowledged the efforts of Borden and Diane Chase, Executive Vice Provost, in preparing the work plan. With the understanding that additional minor updates or modifications may be made to the plan, a motion to recommend the 2013 University Work Plan to the Board of Trustees was approved.

Program Review Policy Revisions

Chase discussed the revision of UCF's Academic Program Review Policies and Procedures 2007-14. Chase stated that the Board of Governor's regulation requires that each university establish and publish clearly defined policies and procedures for reviewing academic degree programs to ensure continuous program improvement. The current document includes the requirements to review baccalaureate program lower-level prerequisites to ensure compliance with common State-approved prerequisites and, when applicable, a review of the program's limited access status to determine if such status is still warranted. The remainder of the policy remains unchanged from its last November 2011 update.

College of Medicine Update

Deborah German, Dean for the College of Medicine, presented an update on the College of Medicine including its achieving full accreditation, the matching of charter class members into top residency programs across the nation, and the graduation rate of the college's charter class.

Provost's Update

Waldrop updated the committee and announced that the bachelor's degree program in photonic science and engineering is scheduled to start in the Fall 2013 term. Waldrop also reported that the Ph.D. degree program in criminal justice would be presented to the Board of Governors for action at its November 2013 meeting.

Waldrop reported that Michael Georgiopoulos has been selected as the new dean for the College of Engineering and Computer Science, and Jeff Jones has been selected for the position of vice provost for Regional Campuses.

Waldrop acknowledged Ms. Christine Morgan, executive assistant to the provost, who retires at the end of May, and thanked Morgan for her years of service to the university.

Chair Garvy adjourned the Educational Programs Committee meeting at 9:45 a.m.

Respectfully submitted: _____ 7-11-13

Tony G. Waldrop
Provost and Executive Vice President

Date

ITEM: EPC-1

EDUCATIONAL PROGRAMS COMMITTEE
University of Central Florida

SUBJECT: Conferral of Degrees

DATE: July 25, 2013

PROPOSED BOARD ACTION

Concurrence: Conferral of degrees at the Summer 2013 commencement ceremonies.

BACKGROUND INFORMATION

UCF expects to award the following degrees at the Summer 2013 commencement ceremonies on August 3, 2013:

2,965	baccalaureate degrees
711	master's degrees
145	doctoral and specialist degrees
3,821	**Total**

Supporting documentation: Registrar's Graduation Count

Prepared by: Amy Swinford, Senior Administrative Assistant to the Vice President and Chief of Staff

Submitted by: John C. Hitt, President

UCF Summer 2013 Commencement

Note: Procession of graduates begins 20 minutes prior to each ceremony.
*Projected Attending (Baccalaureate only) is an estimate based on 70% attending rate

College	Baccalaureate					Master's				Doctorate	
	Intent to graduate	Projected* attending	Pre-Order cap/gown	Head-count	Degree award	Intent to graduate	Indicated attending	Pre-Order cap/gown	Head-count	Intent to graduate	Indicated attending
Saturday, 8/3, 9:00 a.m.											
College of Arts and Humanities	231	162				26	26			1	1
College of Business Administration	554	388				88	88			4	4
College of Education and Human Performance	138	97				184	184			48	48
College of Graduate Studies	0	0				2	2			0	0
Office of Undergraduate Studies	172	120				0	0			0	0
Rosen College of Hospitality Management	241	169				11	11			0	0
College Totals:	**1,336**	**935**				**311**	**311**			**53**	**53**
Total Students Anticipated in Attendance:	**1,299**										
Saturday, 8/3, 2:30 p.m.											
College of Engineering and Computer Science	163	114				87	87			42	42
College of Health and Public Affairs	468	328				188	188			5	5
College of Medicine	43	30				15	15			1	1
Office of Nursing	276	193				38	38			3	3
College of Optics and Photonics	0	0				8	8			9	9
College of Sciences	679	475				64	64			32	32
College Totals:	**1,629**	**1,140**				**400**	**400**			**92**	**92**
Total Students Anticipated in Attendance:	**1,632**										
Degree level ITG totals:	**2,965**					**711**				**145**	
Combined ITG submissions:	**3,821**										
All ceremony projected* attending:	**2,932**										
Anticipated attendance - cap/gown pickup:											
Headcount totals:											
Undergraduate degrees awarded:											

2011-12 Academic Program Review
College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
Department of Civil, Environmental, and Construction Engineering		
Civil Engineering, B.S.C.E.		
• dedicated and high-quality faculty members, including adjuncts who are industry experts • industry partnerships • student job placement • instructional labs • student teams successful in national competitions • active student organizations • program advances state STEM goals	• inconsistent leadership • undergraduate student-faculty ratio limits student feedback and creates office-hour congestion; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • insufficient number of graduate teaching assistantships • faculty and student gender diversity • capstone effectiveness • transfer student preparation for rigor of major, particularly in math skills • internship and co-op coordination • insufficient space in the structures lab	• hire a permanent department chair ***(partially implemented or in progress)*** • review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of strategic niche(s), program goals, and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(not started)*** • assess balance and role of adjunct and full-time faculty-member teaching activity and adjust if appropriate to assure effective delivery of fundamental and practical concepts ***(completed, requiring sustained attention)*** • develop and implement a plan to increase faculty and student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(not started)*** • review curriculum and scope of course offerings in light of available resources and adjust if appropriate; consider number of faculty members and areas of expertise ***(completed, requiring sustained attention)*** • review capstone curriculum and its implementation; adjust to improve integration and effectiveness across applicable majors ***(completed, requiring sustained attention)*** • work with the Office of Undergraduate Studies on curricular alignment with partner institutions to assure student preparation for program rigor; review restricted access requirements and update as appropriate; work with partner institutions and UCF advising units to improve student advising on identifying a path to success ***(partially implemented or in progress)*** • implement a "pending majors" category to improve student success rates ***(completed)*** • consider establishing a peer mentoring program ***(not started)*** • review current internship and co-op coordination and consider options for enhancing student and employer access ***(completed, requiring sustained attention)*** • explore options to meet space needs in the structures lab ***(not started)*** • assure student access to faculty members ***(completed, requiring sustained attention)***

2011-12 Academic Program Review
College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
		• enhance program visibility ***(completed, requiring sustained attention)***
Civil Engineering, M.S.C.E./M.S.		
• dedicated and high-quality faculty members • student quality and commitment • strong industry connections • equipment • program advances state STEM goals	• inconsistent leadership • instructional loads, due to department undergraduate student-faculty ratio, detract from faculty focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • faculty and student diversity • insufficient student office space • insufficient space in the structures lab • availability and variety of courses • breadth of disciplinary knowledge and professionalization levels among some students	• hire a permanent department chair ***(partially implemented or in progress)*** • review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of strategic niche(s), program goals, and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(not started)*** • develop and implement a plan to increase faculty and student gender diversity ***(not started)*** • review faculty workload policy and adjust as appropriate ***(not started)*** • explore options for increasing student office space ***(partially implemented or in progress)*** • explore options for meeting space needs in the structures lab ***(not started)*** • assure reasonable course availability; review multi-year course schedule and make sure it is realistic; consider adding summer sections ***(partially implemented or in progress)*** • review curriculum and adjust if necessary to assure breadth and depth of disciplinary knowledge ***(partially implemented or in progress)*** • enhance professionalization activities and expectations for all students; collaborate with College of Graduate Studies as appropriate; continue to encourage and expand emphasis on student publication ***(partially implemented or in progress)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • enhance program visibility ***(completed, requiring sustained attention)*** • review enrollment and retention trends across all programs; develop and implement an action plan for improvement that is consistent with the department strategic plan ***(not started)***

2011-12 Academic Program Review
College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
Civil Engineering, Ph.D.		
• dedicated and high-quality faculty members • student quality and commitment • strong industry connections • equipment • program advances state STEM goals	• inconsistent leadership • instructional loads, due to department undergraduate student-faculty ratio, detract from faculty focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • faculty and student gender diversity • insufficient student office space • insufficient space in the structures lab • availability and variety of courses • breadth of disciplinary knowledge and professionalization levels among some students • insufficient number of graduate teaching assistantships • current university methodology for assigning international student GPAs	• hire a permanent department chair ***(partially implemented or in progress)*** • review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of strategic niche(s), program goals, and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(not started)*** • develop and implement a plan to increase faculty and student gender diversity ***(not started)*** • review faculty workload policy and adjust as appropriate ***(not started)*** • explore options for increasing student office space ***(partially implemented or in progress)*** • explore options for meeting space needs in the structures lab ***(partially implemented or in progress)*** • assure reasonable course availability; review multi-year course schedule and make sure it is realistic; consider adding summer sections ***(partially implemented or in progress)*** • review curriculum and adjust if necessary to assure breadth and depth of disciplinary knowledge ***(partially implemented or in progress)*** • enhance professionalization activities and expectations for all students; collaborate with College of Graduate Studies as appropriate; continue to encourage and expand emphasis on student publication ***(completed, requiring sustained attention)*** • review allocation of graduate teaching assistantships and adjust if appropriate ***(not started)*** • develop and implement a plan to recruit high-quality domestic students to help enhance program rankings ***(not started)*** • work with the College of Graduate Studies to review methodology used to assign GPA to international students ***(not started)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • enhance program visibility ***(completed, requiring sustained attention)***

2011-12 Academic Program Review
College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
		• review enrollment and retention trends across all programs; develop and implement an action plan for improvement that is consistent with the department strategic plan ***(not started)***
Construction Engineering, B.S.Con.E		
• dedicated and high-quality faculty members, including adjuncts who are industry experts • industry partnerships • student job placement • instructional labs • student teams successful in national competitions • active student organizations • one of the only construction engineering programs accredited by the Accreditation Board for Engineering and Technology (ABET) • all tenured faculty members are licensed professional engineers • program advances state STEM goals	• inconsistent leadership • undergraduate student-faculty ratio limits student feedback and creates office-hour congestion; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • insufficient number of graduate teaching assistantships • faculty and student gender diversity • capstone effectiveness • transfer student preparation for rigor of major, particularly in math skills • internship and co-op coordination • low pass rates on fundamentals in engineering exam • insufficient space in the structures lab	• hire a permanent department chair ***(partially implemented or in progress)*** • review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of strategic niche(s), program goals, and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(not started)*** • develop and implement a plan to increase faculty and student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(not started)*** • assess balance and role of adjunct and full-time faculty-member teaching activity and adjust if appropriate to assure effective delivery of fundamental and practical concepts ***(completed, requiring sustained attention)*** • review curriculum and scope of course offerings in light of available resources and adjust if appropriate; consider number of faculty members and areas of expertise ***(completed, requiring sustained attention)*** • review capstone curriculum and its implementation; adjust to improve integration and effectiveness across applicable majors ***(completed, requiring sustained attention)*** • work with the Office of Undergraduate Studies on curricular alignment with partner institutions to assure student preparation for program rigor; review restricted access requirements and update as appropriate; work with partner institutions and UCF advising units to improve student advising on identifying a path to success ***(partially implemented or in progress)*** • implement a "pending majors" category to improve student success rates ***(completed)*** • consider establishing a peer mentoring program ***(partially implemented or in progress)*** • review current internship and co-op coordination and consider options for enhancing student and employer access ***(completed, requiring sustained attention)***

2011-12 Academic Program Review
College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
		• explore options to meet space needs in the structures lab ***(not started)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • enhance program visibility ***(partially implemented or in progress)*** • evaluate effectiveness and return on investment of having a separate undergraduate degree in construction engineering with separate ABET accreditation ***(not started)*** • encourage students to become licensed ***(completed, requiring sustained attention)***
Environmental Engineering, B.S.V.E.		
• dedicated and high-quality faculty members, including adjuncts who are industry experts • student quality • student gender diversity • industry partnerships • student job placement • instructional labs • student teams successful in national competitions • active student organizations • program advances state STEM goals	• inconsistent leadership • undergraduate student-faculty ratio limits student feedback and creates office-hour congestion; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • faculty gender diversity • capstone effectiveness • transfer student preparation for rigor of major, particularly in math skills • internship and co-op coordination • outdated laboratory equipment	• hire a permanent department chair ***(partially implemented or in progress)*** • review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of strategic niche(s), program goals, and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(not started)*** • develop and implement a plan to increase faculty gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(not started)*** • assess balance and role of adjunct and full-time faculty-member teaching activity and adjust if appropriate to assure effective delivery of fundamental and practical concepts ***(completed, requiring sustained attention)*** • review curriculum and scope of course offerings in light of available resources and adjust if appropriate; consider number of faculty members and areas of expertise ***(completed, requiring sustained attention)*** • review capstone curriculum and its delivery; adjust to improve integration and effectiveness across applicable majors ***(completed, requiring sustained attention)*** • work with the Office of Undergraduate Studies on curricular alignment with partner institutions to assure student preparation for program rigor; review restricted access requirements and update as appropriate; work with partner institutions and UCF advising units to improve student advising on identifying a path to success ***(partially implemented or in progress)***

2011-12 Academic Program Review
College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
		• implement a "pending majors" category to improve student success rates ***(completed)*** • consider establishing a peer mentoring program ***(not started)*** • review current internship and co-op coordination and consider options for enhancing student and employer access ***(completed, requiring sustained attention)*** • review and update laboratory equipment as resources become available ***(partially implemented or in progress)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • enhance program visibility ***(completed, requiring sustained attention)***
Environmental Engineering, M.S.V.E./M.S.		
• dedicated and high-quality faculty members • strong industry connections • student quality and commitment • program advances state STEM goals	• inconsistent leadership • instructional loads, due to department undergraduate student-faculty ratio, detract from faculty focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • insufficient student office space • outdated laboratory equipment • availability and variety of courses • breadth of disciplinary knowledge and professionalization levels among some students	• hire a permanent department chair ***(partially implemented or in progress)*** • review and update department strategic plan within the context of the college strategic plan; assure clear articulation of strategic niche(s), program goals, and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(not started)*** • develop and implement a plan to increase faculty gender diversity ***(not started)*** • review faculty workload policy and adjust as appropriate ***(not started)*** • explore options for increasing student office space ***(partially implemented or in progress)*** • review and update laboratory equipment as resources become available ***(completed, requiring sustained attention)*** • assure reasonable course availability; review multi-year course schedule and make sure it is realistic; consider adding summer sections ***(completed, requiring sustained attention)*** • review curriculum and adjust if necessary to assure breadth and depth of disciplinary knowledge ***(partially implemented or in progress)***

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College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
		• enhance professionalization activities and expectations for all students; collaborate with College of Graduate Studies as appropriate; continue to encourage and expand emphasis on student publication ***(completed, requiring sustained attention)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • enhance program visibility ***(completed, requiring sustained attention)*** • review enrollment and retention trends across all programs; develop and implement an action plan for improvement consistent with the department strategic plan ***(not started)***
Environmental Engineering, Ph.D.		
• dedicated and high-quality faculty members • strong industry connections • student quality and commitment • program advances state STEM goals	• inconsistent leadership • instructional loads, due to department undergraduate student-faculty ratio, detract from faculty focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • insufficient student office space • outdated laboratory equipment • availability and variety of courses • breadth of disciplinary knowledge and professionalization levels among some students	• hire a permanent department chair ***(partially implemented or in progress)*** • review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of strategic niche(s), program goals, and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(not started)*** • develop and implement a plan to increase faculty gender diversity ***(not started)*** • review faculty workload policy and adjust as appropriate ***(not started)*** • explore options for increasing student office space ***(partially implemented or in progress)*** • review and update laboratory equipment as resources become available ***(completed, requiring sustained attention)*** • assure reasonable course availability; review multi-year course schedule and make sure it is realistic; consider adding summer sections ***(partially implemented or in progress)*** • review curriculum and adjust if necessary to assure breadth and depth of disciplinary knowledge ***(partially implemented or in progress)***

2011-12 Academic Program Review
College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
	• current university methodology for assigning international student GPAs	• enhance professionalization activities and expectations for all students; collaborate with College of Graduate Studies as appropriate; continue to encourage and expand emphasis on student publication ***(completed, requiring sustained attention)*** • develop and implement a plan to recruit high-quality domestic students to help enhance program rankings ***(not started)*** • work with the College of Graduate Studies to review methodology used to assign GPA to international students ***(not started)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • enhance program visibility ***(completed, requiring sustained attention)*** • review enrollment and retention trends across all programs; develop and implement an action plan for improvement consistent with the department strategic plan ***(not started)***
Department of Electrical Engineering and Computer Science – Computer Science Division		
Computer Science, B.S.		
• faculty members • facilities • industry board support and engagement • leadership • high demand for graduates • successful high school programming contest that serves as strong recruiting tool • Research Experience for Undergraduates • strong sense of community across divisions • students, including national recognition of programing teams	• undergraduate student-faculty ratio limits student feedback and creates office-hour congestion; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • faculty and student gender diversity • insufficient number of graduate teaching assistants to support instruction • graduate teaching assistants' English communication skills • internship and co-op coordination	• develop a strategic plan within the context of the college strategic plan; assure clear articulation of program goals; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(not started)*** • develop and implement a plan to increase faculty and student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)*** • review allocation of graduate teaching assistantships and adjust if appropriate ***(completed, requiring sustained attention)*** • assure teaching assistants assigned to program courses have appropriate communication skills ***(completed, requiring sustained attention)*** • review current internship and co-op coordination and consider options for enhancing student and employer access ***(partially implemented or in progress)*** • work with the Office of Undergraduate Studies on curricular alignment with partner institutions to assure student preparation for program rigor; work with

2011-12 Academic Program Review
College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
• expertise in virtual environments, computer vision, and machine intelligence • program advances state STEM goals	• transfer student preparation for rigor of major, particularly in math skills	partner institutions and UCF advising units to improve student advising on identifying a path to success ***(partially implemented or in progress)*** • improve coordination of courses across computer science and electrical and computer engineering divisions ***(partially implemented or in progress)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • enhance program visibility ***(partially implemented or in progress)***
Computer Science, M.S.		
• faculty member quality and scholarly productivity, including notably strong recent junior faculty hires • staff member quality • leadership • expertise in computer vision, machine learning, and virtual reality • local industry connections and advisory board • high demand for graduates • benchmarking • laboratory facilities and equipment • strong sense of community across divisions • program advances state STEM goals	• instructional loads, due to department undergraduate student-faculty ratio, detract from faculty focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • faculty and student gender diversity • diffuse program focus • insufficient number of faculty members • elective course availability • time-to-degree • student retention • student recruitment and ability to attract higher numbers of high-quality students • program rigor • inability to address industry demand in certain areas	• develop department strategic plan within the context of the college strategic plan; assure clear articulation of program goals and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(not started)*** • develop and implement a plan to increase faculty and student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)*** • work towards engaging center and institute faculty members in department instructional activity ***(not started)*** • review curriculum, including rigor, and adjust as appropriate (e.g., narrow program focus in light of available resources) ***(not started)*** • assure reasonable availability of courses to facilitate efficient time to graduation; review multi-year course schedule and make sure it is realistic; review appropriateness of minimum enrollment to offer course; improve coordination of courses across computer science and electrical and computer engineering divisions ***(partially implemented or in progress)*** • review enrollment and retention trends across all programs; develop and implement an action plan for improvement ***(not started)*** • develop and implement a recruitment plan to attract greater numbers of high-quality domestic and international students ***(partially implemented or in progress)*** • assure student access to faculty members ***(completed, requiring sustained attention)***

2011-12 Academic Program Review
College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
		• explore additional avenues to foster research funding and student support ***(not started)*** • enhance program visibility ***(partially implemented or in progress)*** • work towards engaging center and institute faculty members in department instructional activity ***(not started)*** • work with appropriate units on campus to expand elective course offerings for electrical engineering students ***(not applicable; pertains to electrical engineering program)***
Computer Science, Ph.D.		
• faculty member quality and scholarly productivity, including notably strong junior faculty members with exceptionally strong research programs • student quality and satisfaction • staff member quality • leadership • expertise in computer vision, machine learning, and virtual reality • local industry connections and advisory board • internal and external partnerships • high demand for graduates • benchmarking • laboratory facilities and equipment • strong sense of community across divisions • program advances state STEM goals	• instructional loads, due to department undergraduate student-faculty ratio, detract from faculty focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • faculty and student gender diversity • diffuse program focus • insufficient number of faculty members • availability of elective courses • time-to-degree • student retention • decreasing number of Ph.D. degrees awarded across college • student recruitment and ability to attract higher numbers of high-quality students	• develop department strategic plan within the context of the college strategic plan; assure clear articulation of program goals and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(not started)*** • develop and implement a plan to increase faculty and student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)*** • work towards engaging center and institute faculty members in department instructional activity ***(not started)*** • review curriculum, including rigor, and adjust as appropriate (e.g., narrow program focus in light of available resources; assure appropriate rigor and breadth in qualifying process) ***(not started)*** • assure reasonable availability of courses to facilitate efficient time to graduation; review multi-year course schedule and make sure it is realistic; review appropriateness of minimum enrollment to offer course; improve coordination of courses across computer science and electrical and computer engineering divisions ***(partially implemented or in progress)*** • review enrollment and retention trends across all programs; develop and implement an action plan for improvement that is consistent with department strategic plan ***(not started)*** • develop and implement a recruitment plan to attract greater numbers of high-quality domestic and international students ***(partially implemented or in progress)***

2011-12 Academic Program Review
College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
	• level of rigor and breadth of knowledge in student qualifying process • insufficient number of graduate teaching assistantships; GTA workload detracts from students' own education • graduate teaching assistants' English communication skills • current university methodology for assigning international student GPAs • inability to address industry demand in certain areas	• assure appropriate rigor in student qualifying process ***(completed, requiring sustained attention)*** • review allocation of graduate teaching assistantships and adjust if appropriate ***(completed, requiring sustained attention)*** • assure teaching assistants assigned to undergraduate courses have appropriate communication skills ***(completed, requiring sustained attention)*** • explore additional avenues to foster research funding and student support ***(not started)*** • enhance program visibility ***(partially implemented or in progress)*** • work towards engaging center and institute faculty members in department instructional activity ***(not started)*** • work with appropriate units on campus to expand elective course offerings for electrical engineering students ***(not applicable; pertains to electrical engineering program)*** • work with the College of Graduate Studies to review methodology used to assign GPA to international students and adjust as appropriate ***(not started)***
Digital Forensics, M.S.		
• program leadership • demand for graduates • quality and quantity of students • computer equipment • availability of highly-qualified adjuncts in the area • up-to-date curriculum • time-to-degree • strong sense of community across divisions • program advances state STEM goals	• impending retirement of the program's only full-time faculty member • insufficient faculty office space limits capacity for growth • faculty and student gender and ethnic diversity • frequency of course offerings from partner units • quality and rigor of student-learning outcomes • lack of integration with other departmental programs	• develop department strategic plan within the context of the college strategic plan; assure clear articulation of program "fit" and goals; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs including program viability that considers current and future resources ***(not started)*** • develop and implement a plan to increase faculty and student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)*** • work with partner units to assure reasonable availability of courses to facilitate efficient time to graduation; review multi-year course schedule and make sure it represents a realistic picture; review appropriateness of minimum enrollment to offer course ***(completed, requiring sustained attention)*** • review enrollment and retention trends across all programs; develop and implement an action plan for improvement that is consistent with department strategic plan ***(not started)***

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Results Summary

Strengths	Weaknesses	Action Recommendations
		• review curriculum, including rigor, and adjust as appropriate ***(not started)*** • revise programs' target student-learning outcomes; develop formal measures to evaluate the effectiveness of the program; continue to monitor metrics to improve the program ***(not started)*** • explore options to engage faculty members from other programs ***(completed, requiring sustained attention)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • enhance program visibility ***(partially implemented or in progress)***
Information Technology, B.S.		
• faculty members • facilities • industry board support and engagement • leadership • high demand for graduates • student quality • program advances state STEM goals	• only non-accredited bachelor's degree program in the college • courses taught mainly by non-tenure track faculty members • faculty and student gender diversity • insufficient number of graduate teaching assistants to support instruction • disconnect between student expectations and program delivery	• develop a strategic plan within the context of the college strategic plan; assure clear articulation of program vision and goals; consider appropriateness of pursuing accreditation by the ABET and resources necessary to assure program viability to meet demand for majors; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(not started)*** • develop and implement a plan to increase faculty and student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)*** • review allocation of graduate teaching assistantships and adjust if appropriate ***(completed, requiring sustained attention)*** • take appropriate steps to assure prospective majors are adequately apprised of program focus ***(completed, requiring sustained attention)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • enhance program visibility ***(partially implemented or in progress)***
Department of Electrical Engineering and Computer Science – Electrical and Computer Engineering		
Computer Engineering, B.S.Cp.E.		
• faculty members • industry board support and engagement	• undergraduate student-faculty ratio limits student feedback and creates office-hour	• develop a strategic plan within the context of the college strategic plan; assure clear articulation of program goals; invest current and new resources in accordance with the plan ***(partially implemented or in progress)***

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Results Summary

Strengths	Weaknesses	Action Recommendations
• leadership • high demand for graduates • Research Experience for Undergraduates • strong sense of community across divisions • program advances state STEM goals	congestion; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • faculty and student gender diversity • insufficient number of graduate teaching assistants to support instruction • graduate teaching assistants' English communication skills • internship and co-op coordination • availability of elective courses	• develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)*** • develop and implement a plan to increase faculty and student gender diversity ***(not started)*** • review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)*** • review allocation of graduate teaching assistantships and adjust if appropriate ***(partially implemented or in progress)*** • assure teaching assistants assigned to program courses have appropriate communication skills ***(completed, requiring sustained attention)*** • review current internship and co-op coordination and consider options for enhancing student and employer access ***(partially implemented or in progress)*** • assure reasonable availability of elective courses; review multi-year course schedule and make sure it represents a realistic picture of available offerings; consider adding summer sections ***(partially implemented or in progress)*** • improve coordination of courses across computer science and electrical and computer engineering divisions ***(partially implemented or in progress)*** • implement a "pending majors" category to improve student success rates ***(completed)*** • assure students' access to faculty members ***(partially implemented or in progress)*** • enhance program visibility ***(partially implemented or in progress)***
Computer Engineering, M.S.Cp.E.		
• faculty member quality and scholarly productivity, including notably strong recent junior faculty hires • staff member quality • leadership • local industry connections and advisory board • high demand for graduates • benchmarking	• instructional loads, due to department undergraduate student-faculty ratio, detract from faculty focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten	• develop department strategic plan within the context of the college strategic plan; assure clear articulation of program goals and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(partially implemented or in progress)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)*** • develop and implement a plan to increase faculty and student gender diversity ***(not started)***

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Results Summary

Strengths	Weaknesses	Action Recommendations
• strong sense of community across divisions • program advances state STEM goals	faculty retention, particularly for tenure-earning faculty members • faculty and student gender diversity • diffuse program focus • insufficient number of faculty members • elective and required course availability • time-to-degree • student retention • student recruitment and ability to attract higher numbers of high-quality students • program rigor • inability to address industry demand in certain areas	• review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)*** • work towards engaging center and institute faculty members in department instructional activity ***(partially implemented or in progress)*** • review curriculum, including rigor, and adjust as appropriate (e.g., narrow program focus in light of available resources) ***(completed, requiring sustained attention)*** • assure reasonable availability of courses to facilitate efficient time to graduation; review multi-year course schedule and make sure it represents a realistic picture; review appropriateness of minimum enrollment to offer course; improve coordination of courses across computer science and electrical and computer engineering divisions ***(completed, requiring sustained attention)*** • review enrollment and retention trends across all programs; develop and implement an action plan for improvement that is consistent with department strategic plan ***(completed, requiring sustained attention)*** • develop and implement a recruitment plan to attract greater numbers of high-quality domestic and international students ***(not started)*** • assure student access to faculty members ***(partially implemented or in progress)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • enhance program visibility ***(partially implemented or in progress)***
Computer Engineering, Ph.D.		
• nationally ranked program • faculty member quality and scholarly productivity, including notably strong recent junior faculty hires • staff member quality • leadership • local industry connections and advisory board • high demand for graduates • benchmarking	• instructional loads, due to department undergraduate student-faculty ratio, detract from faculty focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members	• develop department strategic plan within the context of the college strategic plan; assure clear articulation of program goals and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(partially implemented or in progress)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)*** • develop and implement a plan to increase faculty and student gender diversity ***(not started)*** • review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)***

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Results Summary

Strengths	Weaknesses	Action Recommendations
• strong sense of community across divisions • program advances state STEM goals	• faculty and student gender diversity • diffuse program focus • insufficient number of faculty members • elective and required course availability • time-to-degree • student retention • decreasing number of Ph.D. degrees awarded across college • student recruitment and ability to attract higher numbers of high-quality students • level of rigor and breadth of knowledge in student qualifying process • insufficient number of graduate teaching assistantships; GTA workload detracts from students own education • graduate teaching assistants' English communication skills • current university methodology for assigning international student GPAs • inability to address industry demand in certain areas	• work towards engaging center and institute faculty members in department instructional activity ***(partially implemented or in progress)*** • review curriculum, including rigor, and adjust as appropriate (e.g., narrow program focus in light of available resources; assure appropriate rigor and breadth in qualifying process) ***(completed, requiring sustained attention)*** • assure reasonable availability of courses to facilitate efficient time to graduation; review multi-year course schedule and make sure it represents a realistic picture; review appropriateness of minimum enrollment to offer course; improve coordination of courses across computer science and electrical and computer engineering divisions ***(completed, requiring sustained attention)*** • review enrollment and retention trends across all programs; develop and implement an action plan for improvement that is consistent with department strategic plan ***(completed, requiring sustained attention)*** • develop and implement a recruitment plan to attract greater numbers of high-quality domestic and international students ***(not started)*** • assure appropriate rigor in student qualifying process ***(partially implemented or in progress)*** • review allocation of graduate teaching assistantships and adjust if appropriate ***(completed, requiring sustained attention)*** • assure teaching assistants assigned to undergraduate courses have appropriate communication skills ***(completed, requiring sustained attention)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • work with the College of Graduate Studies to review methodology used to assign GPA to international students ***(not started)*** • enhance program visibility ***(partially implemented or in progress)***
Electrical Engineering, B.S.E.E.		
• faculty members • facilities • industry board support and engagement • leadership	• undergraduate student-faculty ratio limits student feedback and creates office-hour congestion; instructional demands threaten faculty retention, particularly for	• develop a strategic plan within the context of the college strategic plan; assure clear articulation of program goals; invest current and new resources in accordance with the plan ***(partially implemented or in progress)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)***

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Results Summary

Strengths	Weaknesses	Action Recommendations
• high demand for graduates • Research Experience for Undergraduates • strong sense of community across divisions • program advances state STEM goals	tenure-earning faculty members • faculty and student gender diversity • insufficient number of graduate teaching assistants to support instruction • graduate teaching assistants' English communication skills • internship and co-op coordination • availability of elective courses • math and physics preparation among some students	• develop and implement a plan to increase faculty and student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)*** • review allocation of graduate teaching assistantships and adjust if appropriate ***(partially implemented or in progress)*** • assure teaching assistants assigned to program courses have appropriate communication skills ***(completed, requiring sustained attention)*** • review current internship and co-op coordination and consider options for enhancing student and employer access ***(partially implemented or in progress)*** • assure reasonable availability of elective courses; review multi-year course schedule and make sure it represents a realistic picture of available offerings; consider adding summer sections ***(partially implemented or in progress)*** • develop strategies to assure majors have appropriate math and physics preparation ***(partially implemented or in progress)*** • implement a "pending majors" category to improve ability to control incoming student preparation, monitor time-to-degree, and improve student success rates ***(completed)*** • assure students access to faculty members ***(partially implemented or in progress)*** • enhance program visibility ***(partially implemented or in progress)***
Electrical Engineering, M.S.E.E.		
• faculty member quality and scholarly productivity, including notably strong recent junior faculty hires • staff member quality • leadership • local industry connections and advisory board • high demand for graduates • benchmarking • facilities	• instructional loads, due to department undergraduate student-faculty ratio, detract from faculty focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members	• develop department strategic plan within the context of the college strategic plan; assure clear articulation of program goals and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(partially implemented or in progress)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)*** • develop and implement a plan to increase faculty and student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)***

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Strengths	Weaknesses	Action Recommendations
• strong sense of community across divisions • program advances state STEM goals	• faculty and student gender diversity • diffuse program focus • insufficient number of faculty members • availability of elective courses • time-to-degree • student retention • student recruitment and ability to attract higher numbers of high-quality students • program rigor • inability to address industry demand in certain areas	• work towards engaging center and institute faculty members in department instructional activity ***(partially implemented or in progress)*** • work with appropriate units on campus to expand elective course offerings for electrical engineering students ***(completed, requiring sustained attention)*** • review curriculum, including rigor, and adjust as appropriate (e.g., narrow program focus in light of available resources) ***(completed, requiring sustained attention)*** • assure reasonable availability of courses to facilitate efficient time to graduation; review multi-year course schedule and make sure it represents a realistic picture; review appropriateness of minimum enrollment to offer course; improve coordination of courses across computer science and electrical and computer engineering divisions ***(partially implemented or in progress)*** • review enrollment and retention trends across all programs; develop and implement an action plan for improvement that is consistent with department strategic plan ***(completed, requiring sustained attention)*** • develop and implement a recruitment plan to attract greater numbers of high-quality domestic and international students ***(not started)*** • assure student access to faculty members ***(partially implemented or in progress)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • enhance program visibility ***(partially implemented or in progress)***
Electrical Engineering, Ph.D.		
• faculty member quality and scholarly productivity, including notably strong recent junior faculty hires • staff member quality • leadership • local industry connections and advisory board • high demand for graduates • benchmarking • facilities	• instructional loads, due to department undergraduate student-faculty ratio, detract from faculty focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members	• develop department strategic plan within the context of the college strategic plan; assure clear articulation of program goals and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(partially implemented or in progress)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)*** • develop and implement a plan to increase faculty and student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)***

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Strengths	Weaknesses	Action Recommendations
• strong sense of community across divisions • program advances state STEM goals	• faculty and student gender diversity • diffuse program focus • insufficient number of faculty members • availability of elective courses • time-to-degree • student retention • decreasing number of Ph.D. degrees awarded across college • student recruitment and ability to attract higher numbers of high-quality students • level of rigor and breadth of knowledge in student qualifying process • insufficient number of graduate teaching assistantships; GTA workload detracts from students' own education • graduate teaching assistants' English communication skills • current university methodology for assigning international student GPAs • inability to address industry demand in certain areas	• work towards engaging center and institute faculty members in department instructional activity ***(partially implemented or in progress)*** • review curriculum, including rigor, and adjust as appropriate (e.g., narrow program focus in light of available resources; assure appropriate rigor and breadth in qualifying process) ***(partially implemented or in progress)*** • assure reasonable availability of courses to facilitate efficient time to graduation; review multi-year course schedule and make sure it represents a realistic picture; review appropriateness of minimum enrollment to offer course; improve coordination of courses across computer science and electrical and computer engineering divisions ***(completed, requiring sustained attention)*** • review enrollment and retention trends across all programs; develop and implement an action plan for improvement that is consistent with department strategic plan ***(completed, requiring sustained attention)*** • develop and implement a recruitment plan to attract greater numbers of high-quality domestic and international students ***(not started)*** • assure appropriate rigor in student qualifying process ***(partially implemented or in progress)*** • review allocation of graduate teaching assistantships and adjust if appropriate ***(completed, requiring sustained attention)*** • assure teaching assistants assigned to undergraduate courses have appropriate communication skills ***(completed, requiring sustained attention)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • enhance program visibility ***(partially implemented or in progress)*** • work with the College of Graduate Studies to review methodology used to assign GPA to international students and adjust as appropriate ***(not started)*** • work with appropriate units on campus to expand elective course offerings for electrical engineering students ***(partially implemented or in progress)*** • review enrollment and retention trends across all programs and develop an action plan for improvement that is consistent with department strategic plan ***(completed, requiring sustained attention)***

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Strengths	Weaknesses	Action Recommendations
Industrial Engineering and Management Systems		
Industrial Engineering, B.S.I.E.		
• industry relations • facilities and equipment • alumni engagement through department advisory board • accelerated B.S. to M.S. degree program • program advances state STEM goals	• program coordinator nearing retirement • internship and co-op coordination • no linear algebra requirement • required course availability • transfer student preparation for rigor of major, particularly in math skills	• review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of program goals; distribute current and new resources in accordance with the plan ***(completed, requiring sustained attention)*** • develop and implement a plan to assure a smooth transition following program coordinator's impending retirement ***(completed, requiring sustained attention)*** • review current internship and co-op coordination and consider options for enhancing student and employer access***(completed, requiring sustained attention)*** • assure teaching assistants assigned to B.S.I.E. courses have appropriate communication skills ***(completed, requiring sustained attention)*** • review curriculum and course scheduling and adjust as appropriate (e.g., consider adding a linear algebra requirement; assure appropriate availability of required courses) ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(partially implemented or in progress)*** • work with the Office of Undergraduate Studies on curricular alignment with partner institutions to assure student preparation for program rigor; review restricted access requirements and update as appropriate; work with partner institutions and UCF advising units to improve student advising on identifying a path to success ***(partially implemented or in progress)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • enhance program visibility ***(partially implemented or in progress)***
Industrial Engineering, M.S./M.S.I.E.		
• industry relations • facilities and equipment • alumni engagement through advisory board • accelerated B.S. to M.S. degree program	• program focus • overlap between bachelor's and master's program courses • availability of elective courses	• review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of program goals, strategic niche, and target balance between full-time and part-time students, as well as allocation of resources between master's and Ph.D. degree programs; invest current and new resources in accordance with the plan ***(partially implemented or in progress)***

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Strengths	Weaknesses	Action Recommendations
• program advances state STEM goals	• resource imbalance between master's and Ph.D. degree programs	• review curriculum and adjust as appropriate (e.g., reduce and narrow areas of program focus; streamline curriculum; assure differentiated content and rigor between bachelor's and master's degree programs); assure appropriate availability of elective courses ***(completed, requiring sustained attention)*** • increase recruitment of high-quality, full-time domestic students to enhance program reputation ***(partially implemented or in progress)*** • review admissions standards and adjust if appropriate (e.g., consider requiring GRE) ***(completed, requiring sustained attention)*** • review faculty workload policy and adjust as appropriate ***(partially implemented or in progress)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • enhance program visibility ***(partially implemented or in progress)***
Industrial Engineering, Ph.D.		
• industry relations • facilities and equipment • alumni engagement through advisory board • program advances state STEM goals	• program focus • availability of elective courses • resource imbalance between master's and Ph.D. degree programs • uneven faculty research productivity • current university methodology for assigning international student GPAs	• review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of program goals, strategic niche, and target balance between full-time and part-time students, as well as allocation of resources between master's and Ph.D. degree programs; invest current and new resources in accordance with the plan ***(partially implemented or in progress)*** • review curriculum and adjust as appropriate (e.g., reduce and narrow areas of program focus; streamline curriculum); assure appropriate availability of elective courses ***(completed, requiring sustained attention)*** • increase recruitment of high-quality, full-time domestic students to enhance program reputation ***(partially implemented or in progress)*** • improve balance of faculty research productivity ***(partially implemented or in progress)*** • work with the College of Graduate Studies to review methodology used to assign GPA to international students ***(not started)*** • review faculty workload policy and adjust as appropriate ***(partially implemented or in progress)*** • assure student access to faculty members ***(partially implemented or in progress)***

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Results Summary

Strengths	Weaknesses	Action Recommendations
		• explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • enhance program visibility ***(partially implemented or in progress)***
Department of Mechanical, Materials, and Aerospace Engineering		
Aerospace Engineering, B.S.A.E.		
• student advising support structure • faculty members, including adjunct faculty members • student research opportunities • access to internships • student job placement • active professional student organizations • integration with mechanical engineering program provides broad student experience • program advances state STEM goals	• undergraduate student-faculty ratio limits student feedback and creates office-hour congestion; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • facilities and lack of technical staff support • student gender diversity • classroom space • insufficient number of graduate teaching assistantships • high reliance on adjunct faculty members • availability of aerospace-focused elective courses • internship and co-op coordination • transfer student preparation for rigor of major, particularly math skills	• review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of program goals; invest current and new resources in accordance with the plan ***(completed, requiring sustained attention)*** • develop and implement a human resource plan to address program and department needs that considers current and future resources, as well as appropriate mix of full-time versus adjunct faculty members to assure program quality and sustainability ***(partially implemented or in progress)*** • develop and implement a plan to increase student gender diversity ***(not started)*** • review faculty workload policy and adjust as appropriate ***(partially implemented or in progress)*** • review instructional laboratory equipment and update as resources permit ***(partially implemented or in progress)*** • develop and implement a plan to increase student diversity ***(not started)*** • explore options to meet space needs ***(partially implemented or in progress)*** • review curriculum and adjust as appropriate; assure appropriate elective course offerings ***(completed, requiring sustained attention)*** • review current internship and co-op coordination and consider options for enhancing student and employer access ***(partially implemented or in progress)*** • work with the Office of Undergraduate Studies on curricular alignment with partner institutions to assure student preparation for program rigor; review restricted access requirements and update as appropriate; work with partner institutions and UCF advising units to improve student advising on identifying a path to success ***(partially implemented or in progress)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • enhance program visibility ***(partially implemented or in progress)***

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Strengths	Weaknesses	Action Recommendations
Aerospace Engineering, M.S.A.E.		
• student satisfaction and advising support structure • faculty member quality and scholarly productivity • leadership • student research opportunities • student job placement • industry partnerships • research program quality • B.S. to M.S. degree program • non-thesis option meets local industry needs • program advances state STEM goals	• insufficient number of aerospace engineering faculty members • instructional loads, due to department undergraduate student-faculty ratio, detract from faculty focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • insufficient technical support for research laboratories • frequency and currency of course offerings • student gender diversity • space availability • no Ph.D. degree program in aerospace engineering • perceived inequities across programs	• review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of program goals and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(completed, requiring sustained attention)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)*** • develop and implement a plan to increase student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(partially implemented or in progress)*** • assure appropriate elective course offerings and frequency of offerings; review curriculum and multi-year course schedule; update as necessary ***(completed, requiring sustained attention)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • develop and implement a plan to increase student diversity ***(partially implemented or in progress)*** • explore options to meet space needs ***(partially implemented or in progress)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • enhance program visibility ***(partially implemented or in progress)*** • review demand for a Ph.D. degree program in aerospace engineering ***(not started)*** • review perceived inequities across programs and take appropriate steps to resolve ***(completed)***
Materials Science & Engineering, M.S.M.S.		
• student satisfaction and advising support structure • faculty member quality and scholarly productivity	• disconnect between program goals and curriculum • frequency and currency of elective course offerings	• review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of program goals and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(not started)***

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Strengths	Weaknesses	Action Recommendations
• student quality, satisfaction, and motivation • research program quality, including facilities and equipment • student research opportunities • student job placement • industry partnerships • program advances state STEM goals	• student and faculty gender diversity • space availability • perceived inequities across programs	• develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)*** • develop and implement a plan to increase student and faculty gender diversity ***(not started)*** • review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)*** • assure curriculum aligns with program goals and make sure that elective courses are offered with appropriate frequency; review curriculum as well as multi-year course schedule and update each as necessary ***(completed, requiring sustained attention)*** • explore options to meet space needs ***(partially implemented or in progress)*** • develop and implement a plan to increase student diversity ***(not started)*** • develop and implement a plan to recruit high-quality domestic students to enhance program reputation ***(partially implemented or in progress)*** • develop and implement a student retention plan ***(not started)*** • assure student access to faculty members ***(partially implemented or in progress)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • enhance program visibility ***(partially implemented or in progress)*** • review perceived inequities across programs and take appropriate steps to resolve ***(completed)***
Materials Science and Engineering, Ph.D.		
• interdisciplinary • faculty member quality and scholarly productivity • student quality, satisfaction, and motivation • research program quality, including facilities and equipment • student research opportunities • student job placement	• frequency and currency of elective course offerings • student and faculty gender diversity • space availability • limited numbers of domestic students • perceived inequities across programs	• review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of program goals and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(not started)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)*** • develop and implement a plan to increase faculty and student gender diversity ***(not started)*** • distribute current and new resources in accordance with department strategic plan ***(not started)***

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Strengths	Weaknesses	Action Recommendations
• industry partnerships • program advances state STEM goals	• current university methodology for assigning international student GPAs	• review faculty workload policy and adjust as appropriate ***(completed, requiring sustained attention)*** • assure appropriate elective course offerings and frequency of offerings; review curriculum and multi-year course schedule; update as necessary ***(completed, requiring sustained attention)*** • explore options to meet space needs ***(partially implemented or in progress)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • develop and implement a plan to increase student diversity and recruit high-quality domestic students to enhance program reputation ***(partially implemented or in progress)*** • work with the College of Graduate Studies to review methodology used to assign GPA to international students ***(not started)*** • enhance program visibility ***(partially implemented or in progress)*** • review perceived inequities across programs and take appropriate steps to resolve ***(completed)***
Mechanical Engineering, B.S.M.E.		
• student advising support structure • faculty members, including adjunct faculty members • student research opportunities • access to internships • student job placement • active professional student organizations • program advances state STEM goals	• undergraduate student-faculty ratio limits student feedback and creates office-hour congestion; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • instructional laboratory facilities and lack of technical staff support • student gender diversity • availability of elective courses • classroom space • insufficient number of graduate teaching assistantships • internship and co-op coordination	• review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of program goals; invest current and new resources in accordance with the plan ***(completed, requiring sustained attention)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)*** • develop and implement a plan to increase student gender diversity ***(not started)*** • review faculty workload policy and adjust as appropriate ***(partially implemented or in progress)*** • review instructional laboratory equipment and update as resources permit ***(partially implemented or in progress)*** • develop and implement a plan to increase student diversity ***(not started)*** • explore options to meet space needs ***(partially implemented or in progress)*** • review curriculum and adjust as appropriate; assure appropriate elective course offerings ***(completed, requiring sustained attention)*** • review current internship and co-op coordination and consider options for

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Strengths	Weaknesses	Action Recommendations
	• transfer student preparation for rigor of major, particularly in math skills	enhancing student and employer access ***(partially implemented or in progress)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • enhance program visibility ***(partially implemented or in progress)***
Mechanical Engineering, M.S.M.E.		
• student satisfaction and advising support structure • faculty member quality and scholarly productivity • leadership • student research opportunities • student job placement • industry partnerships • research program quality • B.S. to M.S. degree program • non-thesis option meets local industry needs • program advances state STEM goals	• instructional loads, due to department undergraduate student-faculty ratio, detract from focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • insufficient technical support for research laboratories • diffuse program offerings (e.g., number of tracks and certificate programs) • frequency and currency of course offerings • no available student support for those being groomed for Ph.D. degree program • student gender diversity • space availability • perceived inequities across programs	• review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of program goals and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(completed, requiring sustained attention)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)*** • develop and implement a plan to increase student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(partially implemented or in progress)*** • narrow program focus and assure appropriate elective course offerings; review curriculum and multi-year course schedule; update as necessary ***(completed)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • develop and implement a plan to increase student diversity ***(partially implemented or in progress)*** • explore options to meet space needs ***(partially implemented or in progress)*** • enhance program visibility ***(partially implemented or in progress)*** • review perceived inequities across programs and take appropriate steps to resolve ***(completed)*** • assure student access to faculty members ***(completed, requiring sustained attention)*** • explore opportunities to address unmet industry demand that benefit department ***(partially implemented or in progress)***

2011-12 Academic Program Review
College of Engineering and Computer Science
Results Summary

Strengths	Weaknesses	Action Recommendations
Mechanical Engineering, Ph.D.		
• student satisfaction and advising support structure • faculty member quality and scholarly productivity • leadership • student research opportunities • student job placement • industry partnerships • research program quality • program advances state STEM goals	• instructional loads, due to department undergraduate student-faculty ratio, detract from focus on graduate education, as well as scholarly and other activities that promote program reputation; instructional demands threaten faculty retention, particularly for tenure-earning faculty members • insufficient technical support for research laboratories • frequency and currency of elective course offerings • space availability • insufficient number of graduate teaching assistantships • student gender diversity • limited numbers of domestic students • perceived inequities across programs • current university methodology for assigning international student GPAs	• review and update the department strategic plan within the context of the college strategic plan; assure clear articulation of program goals and target balance between graduate and undergraduate activities; invest current and new resources in accordance with the plan ***(completed, requiring sustained attention)*** • develop and implement a plan to address program and department human-resource needs that considers current and future resources ***(partially implemented or in progress)*** • develop and implement a plan to increase student gender diversity ***(partially implemented or in progress)*** • review faculty workload policy and adjust as appropriate ***(partially implemented or in progress)*** • assure appropriate elective course offerings and frequency of offerings; review curriculum and multi-year course schedule; update as necessary ***(completed)*** • explore options to meet space needs ***(partially implemented or in progress)*** • explore additional avenues to foster research funding and student support ***(partially implemented or in progress)*** • develop and implement a plan to increase student diversity and recruit high-quality domestic students to enhance program reputation ***(partially implemented or in progress)*** • work with the College of Graduate Studies to review methodology used to assign GPA to international students ***(not started)*** • enhance program visibility ***(partially implemented or in progress)*** • review perceived inequities across programs and take appropriate steps to resolve ***(completed)***