ANNUAL REPORT: June 1, 2014 – May 31, 2015
(i.e., Summer 2014, AY 2014-2015)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

NAME: Melissa K. Fierke, Associate Professor, Forest Entomology

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

	Course No.	Title	Credit Hrs.	No. Students	No. of Lab. Sections
SUMMER:	EFB202	Entomol, Stats, Projects (13 days)	3	80	Session A & C
FALL:	EFB101	General Biology I	3	311	
	EFB797	EFB Core Course	1	12	
SPRING:	EFB797	EFB Core Course (w/ J. Cohen)	1	14	

NOTE: PLEASE INDICATE WHICH COURSE(S) HAD A SERVICE-LEARNING COMPONENT AND BRIEFLY EXPLAIN THE NATURE OF THIS COMPONENT. For examples of service-learning in courses, see: http://www.esf.edu/students/service/courses.htm. Service-learning is a form of structured experiential education in which students engage with the community to be active learners, to enrich their sense of civic responsibility, and to explore practical application for course content. Faculty oversight, reflective thinking, and reciprocity are key components of service-learning. EFB courses currently listed with service-learning components include: 416/6/1, 486, 518, 521, 532, 446/646.

None.

2. Non-Scheduled Course Offerings (e.g., 496, 899, 999)

	Course No.	Title	Credit Hrs.	No. Students
FALL:	EFB298	Research Internship	1	1
	EFB420	EFB Internship	13	4
	EFB495	UG College Teaching	11	8
	EFB498	Independent Research	3	1
SPRING:	EFB298	Research Apprenticeship	1, 2	2
	EFB420	Prof Internship	1	1
	EFB498	Independent Research	1	1
	EFB798	Research Problems	1	6
	EFB898	Professional Experience	6	1

3. Continuing Education and Extension (short courses, workshops, etc.)

SUMMER: BOCES High School Program at Cranberry Lake (7 days) (34 students)

4. Guest Lecture Activities

Course No.	Title	No. of Lectures

FALL: ENS132 Orientation Seminar: ENVSCI 1

II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor _23_ and unofficial advisor _2_

B. Graduate Students: (list name, degree sought, starting date, month & year; if a degree was completed, please give date and full citation for the thesis or dissertation).

MAJOR PROFESSOR

Christopher Foelker	PhD	07/11	
Michael Parisio	MS	07/12-12/14	Biological control parasitoids of emerald ash borer: assessment and applications of current monitoring methods
Michael Jones	PhD	08/13	
Dana Brennan	MS	05/15	

CO-MAJOR PROFESSOR

Joelle Chille (w/ C Whipps)	MPS	01/12-8/14	New biological and cultural control methods of the non-native nursery pest *Xylosandrus germanus*
Stephanie Nicks(w/ B Folta)	MPS	08/14	
Stephen Pecylak (w/ G McGee)	MS	01/15	
Giuseppe Tuminello (w/ T Volk)	MS	08/14	
Nicholas Piedmonte (w/ S Shaw)	MS	01/15	

MEMBER, STEERING COMMITTEE (other than those listed above)

Cheryl Bondi	PhD	08/10	
Zachary Smith	MS	01/13	
Molly Hassett	MS	08/13-5/15	Habitat characteristics and sugar resources of emerald ash borer parasitoid release sites in New York State
Geoffrey Griffiths	PhD	08/14	
Nichole Henger	MS/MFA	08/14	

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Will Helenbrook	PhD Examiner	10-14	Effects of ecological disturbance on parasite communities in both people and mantled howler monkeys living in Ecuador
Daniela Manuschevich	PhD Chair	11-14	Linking policy to changes in ecosystem benefits: a socio-ecological approach to land use change in Chile
Georgia Keene	MS Examiner	12-14	Spatial ecology and phenology of the inland barrens buck moth, *Hemileuca maia* (Drury) at the Albany Pine Bush Preserve
Miguel Zapata	MS Examiner	5-15	Influence of environmental variation of the epiphytic bryophyte assemblage on sugar maple in northern and central New York

III. RESEARCH COMPLETED OR UNDERWAY

A. Departmental Research (unsupported, boot-legged; title - % time spent)

I am working on a project with USDA APHIS, USDA ARS, NYDEC, NYDAM, & New York State Parks, to quantify dispersal of emerald ash borer parasitoids along a linear corridor. 2%

I am working with Bekka Brodie, as her postdoctoral advisor, to quantify presence and abundance of cerambycids of conservation interest in Romanian Forests. Synergy Chemicals and USDA APHIS have provided lures and traps for the research. 2%

My lab is working with Rainbow Tree Care on a study evaluating new formulations of emmectin benzoate to save large trees. They are compensating us for this research by purchasing a chainsaw for the lab. 1%

NY DEC provides summer field research transportation (a vehicle with gas and repairs included). Also, provides support via personnel to help with EAB research.

B. 1. Grant-supported Research (source, subject, amount - total award and current year, award period starting and ending dates; list graduate research assistants supported by each grant)

M.K. Fierke. Geographical comparisons of the synchrony and phenology of emerald ash borer and its introduced larval parasitoids in New York State. 4/15-3/16. $102,284. Cooperative Workplan with J. Gould, USDA APHIS. Supports a Research Support Specialist, Mike Parisio, and an UG technician.

M.K. Fierke. Assessing compatibility of insecticides and biocontrol for controlling emerald ash borer in urban environments. 5/15-4/16. $20,000. Cooperative Workplan with J. Gould, USDA APHIS. Used as a topper for Mike Jones (PhD student) and an UG technician.

M.K. Fierke, G.G. McGee. Restoration of understory vascular plant and pollinator assemblages in post-agricultural forest of central NY. 8/15-9/17. McIntire-Stennis Cooperative Forestry. $57,669. Geoffrey Griffiths, PhD.

S. Shaw, **M.K. Fierke**. 8/15-9/17. Elucidating characteristics of forest/residential land interfaces associated with increased risk of tick-borne diseases. McIntire-Stennis Cooperative Forestry. $59,694. Nick Piedmonte, MS.

G.G. McGee, **M.K. Fierke**. Nutrient resources associated with establishment and long-term maintenance of emerald ash borer biocontrol agents. 8/14-9/16. McIntire-Stennis Cooperative Forestry. $53,860. Molly Hassett & Stephen Pecylak, both MS.

M.K. Fierke, J. Gould, J. Vandenburg, L. Bauer. Assessing the impact of emerald ash borer biological control on the health of ash trees in two outlier infestations in New York State. 8/13-7/16. $119,416. Northeastern States Research Cooperative. Michael Parisio & Dana Brennan, both MS.

S.J. Ryan, **M.K. Fierke**. Modeling the mother trees: the super spreader phenomenon in an emerging emerald ash borer. 8/13-9-15. McIntire-Stennis Cooperative Forestry. $80,302. Michael Jones, PhD.

C.M. Whipps, **M.K. Fierke**, D. Parry. Development of molecular techniques to inform management of *Sirex noctilio*, an introduced woodwasp. 5/13-9/15. McIntire-Stennis Cooperative Forestry. $87,235. Christopher Foelker, PhD.

2. Research Proposals pending (include information as in B.1, above).

J.J. Duan, J.D. Vandenberg, D. McCullough, **M.K. Fierke**, L. Bauer, T. Poland, C. Sadof, R. Van Driesche, M. Whitmore. Areawide management of the invasive emerald ash borer to protect U.S. nursery, urban, and natural forest ecosystems. USDA-ARS. $1,200,000 ($200,000 to ESF).

T. Volk, et al. Expansion and integration of shrub willow crops with forest biomass and other landscape elements for bioenergy, bioproducts, and bioremediation.

3. Research Proposals submitted, but rejected (include information as in B.1, above)

Greg McGee, **M.K. Fierke**. Engaging citizen scientists with studies of plant-pollinator interactions in the Northern Forest. $104,443. NSRC. Final reviews were >3 (3 = very good, 4 = excellent).

IV. PUBLICATIONS

A. Refereed Publications

Rutledge, C., **M.K. Fierke,** P. Careless, C. Teerling. Degree day model for emergence of *Cerceris fumipennis* in Northeastern America based on field observations. Annals of the Entomological Society – submitted.

C.J. Foelker, C. Standley, **M.K. Fierke**, D. Parry, C.M. Whipps. Developing molecular techniques to establish host-parasitoid linkages among *Sirex noctilio*, *S. nigricornis*, and native hymenopteran parasitoids. Agriculture and Forest Entomology - submitted.

C.J. Foelker, C. Standley, D. Parry, **M.K. Fierke**. Phenology and parasitism of *Sirex noctilio* and its associated hymenopteran assemblage in North America. Canadian Entomologist - submitted.

B. Non-refereed Publications

M.K. Fierke, C.J. Foelker. 2014. Scorpionflies: Unusual Forest Insects. New York Forest Owner.

C. Papers Presented at Science Meetings (give title, date, occasion, and location)

R. Crandall, C.J. Foelker, **M.K. Fierke**. 2015. Woodwasp (*Sirex noctilio*) venom and pine host species affect growth of fungal symbiont (*Amylostereum areolatum*). ESF Spotlight on Student Research. Poster.

J. Gould, **M. Fierke**, G. Cook, M. Jones. Dispersal of the emerald ash borer parasitoid *Tetrastichus planipennisi* along a linear greenway in New York. 2015 Eastern Branch Meeting of the Entomological Society of America. Rehoboth, DE.

M. Jones, S. Ryan, **M.K. Fierke**. Understanding the emerging emerald ash borer infestation in New York. 1/2015, New York Society of American Foresters Ann. Meeting, Syracuse NY. Presentation.

C.J. Foelker, **M.K. Fierke**, D. Parry, C.M. Whipps. Developing molecular techniques to establish host-parasitoid linkages among *Sirex noctilio*, *S. nigricornis*, and native hymenopteran parasitoids. 1/2015 USDA Interagency Research Forum on Invasive Species – Annapolis, MD. Presentation.

M. Jones, S. Ryan, **M.K. Fierke**. Understanding the emerging emerald ash borer infestation in New York. 1/2015 USDA Interagency Research Forum on Invasive Species – Annapolis, MD. Poster.

M. Jones, S. Ryan, **M.K. Fierke**. Understanding the emerging emerald ash borer infestation in New York. 2014 Emerald Ash Borer National Research & Technology Development Meeting, Wooster, OH. Poster.

M. Parisio, J. Gould, J. Vandenberg, L. Baeur, **M.K. Fierke**. Assessment of emerald ash borer parasitoid recovery methods within white ash stands in New York. 10/2014. 2014 Emerald Ash Borer National Research & Technology Development Meeting. Wooster, OH. Poster.

M. Hassett, G. McGee, **M.K. Fierke**. 10/2014. 2014 Emerald Ash Borer National Research & Technology Development Meeting. Wooster, OH. Poster.

G. Tumminello, J. Gould, M. Parisio, J. Vandenberg, L. Bauer, **M.K. Fierke**. Parasitoid releases against emerald ash borer in New York State. 10/2014. 2014 Emerald Ash Borer National Research & Technology Development Meeting. Wooster, OH. Poster.

C. J. Foelker, D. Parry, C.M. Whipps, **M.K. Fierke**. Colonization patterns of *Sirex noctilio* at a pine plantation in the Adirondacks. 11/2014 Entomological Society of America annual meeting. Portland, OR. Presentation.

M. Parisio, J. Gould, J. Vandenberg, L. Baeur, **M.K. Fierke**. Assessment of emerald ash borer parasitoid recovery methods within white ash stands in New York. 11/2014. Entomological Society of America annual meeting. Portland, OR. Poster.

M. Jones, **M.K. Fierke**, S. Ryan. Understanding the emerging emerald ash borer infestation in New York. 11/2014. Entomological Society of America annual meeting. Portland, OR. Poster.

J. Vandenberg, G. Tumminello, J. Gould, M. Parisio, L. Bauer, **M.K. Fierke**. Parasitoid releases against emerald ash borer in New York State. 11/2014. Entomological Society of America annual meeting. Portland, OR. Poster.

D. Public Service Presentations (lectures, seminars, etc. to and for the public; give group or occasion, date(s), and attendance)

Careers in Biology, Ed Smith AVID middle school students, 6^{th}, 7^{th}, 8^{th} grades (100 students + teachers).

E. Invited Research Presentations

M.K. Fierke. Girdling, Peeling and Rearing to Know: Insights into New York Forest Invaders. 11/2014, Hobart and William Smith.

M. Domingue, W. Hellman, J. Francese, **M.K. Fierke**, C. Rutledge. Using buprestid monitoring tools for obtaining diverse collections of forest insects. 11/2014. Entomological Society of America annual meeting. Portland, OR.

J. Gould, L. Beaur, J. Dian, **M.K. Fierke**. Update on recovery and establishment of EAB parasitoids. 10/2014 Emerald Ash Borer National Research and Technology Development Meeting. Wooster, OH.

V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

1. Government Agencies (Federal, State, Local):

2. Industrial and Commercial Groups, etc.

Reviewed Pearson's Tough Topics modules

B. Unfunded Service to Governmental Agencies, Public Interest Groups, etc.

Serve as a science advisor to NYDEC on emerald ash borer and other forest invasives and attend meetings in Albany as needed.

Serve as co-director, along with Mark Whitmore (Cornell Natural Resources Dept), for the New York Forest Health Advisory Council. In this position I organize & facilitate annual/semi-annual meetings at ESF.

I serve on the City of Syracuse Emerald Ash Borer Task Force attending monthly meetings with other collaborators, e.g., Steve Harris, the Syracuse City Arborist, Jesse Lyons, Cornell Cooperative Extension, David Coburn, Onondaga Director of the Environment. I am a member of several sub-committees where we work on developing and implementing an emerald ash borer preparedness plan for the City of Syracuse and Onondaga County.

Answered questions from the public on insects/arthropods throughout the reporting period.

Organized the entomology portion of the Presidential Bioblitz on Onondaga Lake, 8/14.

Quoted in New York Times for ESF bike sharing program, 10/14: http://www.nytimes.com/2014/10/06/nyregion/facing-many-obstacles-bike-sharing-slowly-gains-traction-upstate.html?_r=0

VI. PROFESSIONAL DEVELOPMENT

A. Professional Honors and Awards (for teaching, research, outreach, etc.)

2014 Presidential Award for Public Service/Outreach

B. 1. Activities in Professional Organizations (offices held, service as chairman, member, participant or consultant) - None

2. Professional Society Membership

Entomological Society of America

Canadian Entomological Society

3. Other Professional Activities

a. Editorial activity - Associate Editor, Forest Science (Society of American Foresters)

b. Reviewer

Journal(s)	No. of manuscripts
Agriculture and Forest Entomology	1
Canadian Entomologist	3
Northeastern Naturalist	1
Environmental Entomology	1
Journal of Pest Management	1

Note: for 2 reviews, I mentored one of my PhD students through the review process (with permission)

Graduate Women in Science (GWIS) Fellowship Review Committee – 2 applications

c. Participation (workshops, symposia, etc.)

Symposia organized	Date	Place

C. Further Education/Re-training Undertaken, Leaves, Workshops, etc.

D. Foreign Travel (Where, When, Purpose)

None

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

Co-chair Graduate Program Advisory Committee

Scholarship committees: Roskin undergraduate award to outstanding female senior
Chun Wang to outstanding female senior undergraduate award
Outstanding PhD student award
Lanier, Stegeman and Simeone Endowed Entomology Fellowships

B. College-level

Secretary, Faculty Governance

Faculty Governance Executive Committee

Chair, Bicycle Safety Committee – founded in January 2013 to engage stakeholders at ESF, SU and the City of Syracuse to increase cycling safety for ESF commuters

Sustainability Committee

Athletics Committee

First Year Experience – Meetings and participated in the Freshmen Learning Community Retreat in September 2014

Graduate Assistant Colloquium on Teaching and Learning Blackboard training

Development of a college biology course, in collaboration with Outreach and local high school teachers and administrators, now offered in 3 local high schools

December Senior Soiree

Science Fair Judge for ESF Outreach: Middle School and ESF in the High School

C. University-wide, including Research Foundation

Conversations in the Discipline grant: P. Hirsch, **M.K. Fierke**, S. Turner, P. Vidon, S. Weiter. $5,000. Depolarizing the Environment: Thinking broadly about science, policy and politics.

D. Post-doctoral Research Associate Mentoring (list name(s) of post-docs and period of employment)
None

E. Research Support Specialist (list name(s) and period of employment): Michael Parisio, 4/15-current

VIII. SUMMARY OF SIGNIFICANT ACTIVITIES AND ACCOMPLISHMENTS DURING THIS REPORTING PERIOD, ESPECIALLY THOSE MOST NOTEWORTHY AND RELATIVE TO THE COLLEGE'S AND DEPARTMENT'S MISSION.

One paragraph on each of the following (**i.e., three paragraphs total**) would be most helpful: this past year, what have you done for our students, department/college, and self professionally? NOTE: The information in this section (along with the supporting specific information elsewhere in this report) should be your strongest case for being considered for a discretionary raise (when available), which I'll continue to award based on your contributions to the department and college this reporting period.

I taught General Biology for the seventh year with >320 students (a college enrollment record). I supervised three graduate and six undergraduate teaching assistants along with their workshops and grading - all went smoothly with overall class evaluations again strong for the two lecture sections. I facilitated the EFB Core Course for graduate students where the main goal was get grads off to a good start in the department, forming a supportive cohort of students as well as working with my PhD grad, Chris Foelker, to provide an overview of Philosophy of Science. I oversaw five internships summer and fall 2014. Two students worked on research projects under me this past fall/spring and one of them presented at ESF's Spotlight on Research. I've written >20 UG student recommendation letters with many resulting in successful internships, positions, or scholarships. I am happy with the current state of my research program and the progress of my graduate students. We have several publications submitted and are working on many more. Three of my graduate students presented at the National Entomological Society meeting in Portland, OR this past year, and two at Annual USDA Invasive Insect meeting in Annapolis and the New York Society of American Foresters meeting in Syracuse. I've had four new MS students start in August/Jan/May. I have accepted several invitations to speak on my labs research this past year at local, state and regional meetings, but have passed on the opportunity to Chris Foelker, my PhD student finishing up, so he can network and hopefully find a position when he finishes. I have also had to turn down a couple of invitations. Particularly noteworthy is that Chris received the EFB Outstanding PhD award for EFB this past spring. Mike Jones (PhD) and Mike Parisio (MS) also received awards via the Stegeman Fellowship to support their travel to the Portland ESA meeting.

I served on six departmental and college committees as well as taking an active part in the ESF First Year Experience Committee, working with other faculty and Student Affairs staff on student retention and success. I have continued my efforts on our ESF Bicycle Safety Committee and have been working with ESF partners, Syracuse University engineers, planners and safety officials as well as the City of Syracuse Transportation Planner, and multiple neighborhood groups to make bicycling a safer commuting option for faculty, staff and students at ESF. I've continued my entomology outreach efforts, doing presentations and media interviews, however, I now pass most opportunities to my graduate students who are doing an excellent job of taking them on, being enthusiastic and getting our science out there.

Lastly, I received the 2014 President's Award for Community Service this past year for the work I have done on the Bike Safety Committee, advocating for bicyclists in the community, and outreach efforts for emerald ash borer. I am continuing community engagement with new partnerships with Common Councilor Nadar Maroun on deer density issues along with Brian Underwood (ESF). This ties into newly funded research (with Steve

Shaw, ERE) on distribution and densities of black legged deer ticks and tick borne disease prevalence, with an emphasis on Lyme disease. We have presented at a meeting with the Onondaga Health Commission and will be working with them and the NY Department of Health on this salient issue.

IX. A. FUTURE PLANS, AMBITIONS, AND POTENTIAL CONTRIBUTIONS FOR YOUR OWN PROFESSIONAL DEVELOPMENT AND THE ENHANCEMENT OF THE PROGRAM IN ENVIRONMENTAL AND FOREST BIOLOGY (brief summary)

This fall I will again be teaching EFB101, General Biology, and I aim to incorporate more active learning as well as a new technology called Learning Catalytics in the classroom. I will again facilitate the EFB Core Course in the fall semester and bring in Shannon Farrell to help with the philosophy of science portion. I plan to again co-facilitate a seminar on scientific writing in the spring semester with the goal of all students producing a research proposal. I will continue my outreach and service efforts on behalf of ESF and EFB and will explore professional development avenues, including attending conferences and workshops in the coming year as my teaching load allows.

A new MPS student will be starting in the fall in my lab and I am very much looking forward to working with her and my new MS graduate student as well as continuing working with my current grads, mentoring them through graduate school, facilitating their research projects, making sure they publish their results, and cultivating professional positions for them. I plan to again attend the National Entomological Society of America conference in Minneapolis MN this coming fall and have funding so that all of my current graduate students can attend and present their research. We will all be doing outreach and recruiting graduate students into our entomology program at ESF. I will also attend the Invasives Meeting in Annapolis MD in Jan 2016 with my graduate students where we will present our research. I will continue to write grants to fund new students and am determined to explore other avenues of funding considering the reality of reduced funding opportunities for traditional entomological research.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2015

   a. Course(s) to be offered: Entomology, stats & supervise projects for CLBS EFB202
   Facilitate BOCES high school program at CLBS

   b. Proposed research activity

   I will be spending a great deal of time this coming summer on a several projects. One is a parasitoid dispersal study south of Rochester on a 15 km stretch of the Genesee Greenway. Another is a phenology study looking at synchrony of EAB parasitoids and life stages of EAB. Another is an integrated pest management project aimed at determining if parasitoid releases along with insecticides can decrease EAB populations.

   Mentoring the following graduate student research:

   Chris Foelker (PhD) will finish his dissertation research on *Sirex noctilio*.

   Mike Jones, (PhD) will be working on EAB phenology and several other EAB projects, including gathering dendroentomological data on establishment and landscape data on dispersal.

   Nick Peidemonte is assessing distribution and densities of black legged ticks and prevalence of tick borne diseases. We are partnering with NY DOH to do the disease assessments.

   Giuseppe Tumminello is identifying and quantifying pollinators associated with willow biomass plantings on the Solvay waste bed in Syracuse.

   Stephen Pecylak is evaluating attraction of EAB parasitoids to different colors to maximize trapping methods.

Dana Brennon started in May on her MS research on EAB. Dana is the recipient of the 2015 Simeone Forest Entomology recruitment award.

Stephanie Nicks is finishing up her MPS via an internship with the Town of DeWitt Naturalist on a EAB.

Supervising/mentoring the following undergraduate student research:

Jared Carpentier, Brad Winkleman, and Elliott Hunsinger, (ESF UGs), are working in the lab on EAB and EAB parasitoids. Brad will be developing a research project.

Terrance Caviness and Richard Rich (ESF UGs) are working with me and G. McGee evaluating stand and vegetation data in EAB parasitoid release sites.

Ian Kenny (ESF UG) is doing an internship with NY DEC this summer and doing research on methods to trap *Sirex noctilio* and *Sirex nigricornis*.

Brigette Wierzbicki (ESF UG) is working with Nick Peidmonte doing tick collections and will be developing a project to quantify small mammal populations in East Syracuse to overlay tick data and deer data collected by one of Brian Underwood's grad students.

Julia Hart (ESF UG) is doing an internship with NY DEC this summer and will be developing a Forest Health project on Southern Pine beetle.

c. University, professional society, and public service

I will give presentations at the Graduate Teaching Assistant Colloquium as well as Freshman Orientation.

Serve as Associate Editor, Forest Science.

2. Fall Semester 2015

a. Course(s) to be offered - EFB101. Gen Bio I: Organismal Biology and Ecology 3 credits
EFB797 EFB Core Course (w/ S. Farrell) 1 credit

b. Proposed research activity

S. noctilio, emerald ash borer, EAB parasitoids, and tick research.

c. University, professional society, and public service

Chair, Bicycle Safety Committee

Sustainability Committee

Secretary, Faculty Governance

Faculty Governance Executive Committee

Athletics Committee

Co-Chair EFB Graduate Program Advisory Committee

First Year Experience member

Associate Editor, Forest Science

3. Spring Semester 2016

a. Course(s) to be offered

EFB566	Systematic Entomology	3 credits
EFB797	Scientific Writing & Research	1 credit (w/ J. Cohen)

b. Proposed research activity

S. noctilio, emerald ash borer, EAB parasitoids, and tick research.

c. University, professional society, and public service

Chair, Bicycle Safety Committee
Sustainability Committee
Secretary, Faculty Governance
Faculty Governance Executive Committee
Athletics Committee
First Year Experience member
Co-Chair EFB Graduate Program Advisory Committee
Associate Editor, Forest Science

4. Maymester 2016

a. Course(s) to be offered:

Forest Health Monitoring