



NEW MAJORS PROPOSAL

March 18, 2019 (Rev. October 25, 2019)

The Department of Agricultural & Applied Economics (AAEC) requests approval to create four new majors, by elevating three of our existing concentrations (options) to major status: Environmental Economics Management & Policy (EEMP), International Trade & Development (ITD), and Community Economic Development (CED), and an entirely new major in Food & Health Systems Economics (FHSE).

Our current degree structure consists of two degrees: AGRIBUSINESS (AGRB) and APPLIED ECONOMIC MANAGEMENT (AEM). Underneath our AEM degree, we have a single major (AEM) with three concentrations/options: EEMP, ITD, CED.

Our *proposed* degree structure consists of the same two degrees (AGRB & AEM), with four new majors underneath the AEM degree: FHSE, EEMP, ITD, CED.

Rationale

Few high school graduates come to VT (or any university) with knowledge of “Agricultural Economics - AGECON” as a field of study and professional career. Hence, we attract most of our undergraduate majors via our introductory service courses to CALS and CLE/PATHWAYS.

However, even that process is confusing to enrolled VT students because our curricular programs concentrations/options are buried underneath our AEM degree/major, i.e., EEMP, ITD and CED are not listed on VT’s academic majors website, nor is the term Applied Economic Management (AEM) very meaningful to students exploring majors. Thus, we wish to elevate EEMP, ITD and CED to major status to more accurately reflect program content and facilitate recruitment.

Secondly, we want to create a timely new major focused on Food & Health Systems Economics (FHSE). We are excited about this new major for it will educate and prepare students for careers in both dimensions (production and distribution) of healthy food supply and demand systems, uniquely linking the two parameters essential to a safe and sustainable diet for consumers.

In the past 15-20 years, interest in the health implications of the food system has significantly increased. There is emerging demand for graduates capable of evaluating policies and practices that promote healthier systems of food production, distribution, processing, and preparation. With its cluster hire of three senior faculty in health economics, AAEC is uniquely positioned among U.S. Land Grant Colleges to address holistic linkages across food systems and health outcomes. AAEC is committed to providing coursework and experiential learning, fitting the

VT shaped curriculum, that give students an in-depth understanding of the linkages among systems of food production and health outcomes.

Though our current students consider themselves as majoring in EEMP, ITD or CED, this information is stated only on their transcript. Should our request be approved, our graduates will be able to accurately claim that they majored in their area of concentration and have it confirmed on their diplomas.

Future students internal and external to VT will be more readily able to identify and understand what majors are available in AAEC at VT. With enhanced visibility, we also anticipate more VT students will see and take our courses for minors and as electives.

Under separate documentation, we are submitting our Revised Checksheets for each new major.

Students Serviced

AAEC currently educates 200+ undergraduate majors and 49 minors.

Resource Needs

No new resources are necessary to implement these changes. Please find attached letters of support from all VT departments whose courses our students take. No comments or concerns were received via 15-Day Review.

Teach-out Plan

For discontinued options:

- How many students are enrolled in the options: ITD = 36, EEMP = 28, CED = 12.
- Approximate graduation term for those in the options: Spring 2023. Last term to graduate Fall 2023.
- What is the last term to enroll for the options: Spring 2020 for current students; Fall 2019 or Spring 2020 for new students.
- How will the students get through, if they don't want to change to the major? Other than PATHWAYS courses, the required courses on the current versus new Checksheets are identical; plus, we will make substitutions as needed on a student-by-student basis.

For new majors:

- When is the first term to declare the new majors: Summer 2020.
- When is the first graduation term for the new majors: Winter 2022.

Administration

These major changes would be effective for all students graduating in 2022 and for those currently enrolled freshmen in the Class of 2022 who wish to convert their Checksheets and adjust their curricula accordingly (<20%).

If approved, we will:

- Post the information on our departmental website;
- Request Registrar authorization and ;
- Notify all current students via email;
- Educate CALS and VT Advisors formally and informally.

Matt Holt, AAEC Department Head

Mike Ellerbrock, AAEC Undergraduate Director



COLLEGE OF AGRICULTURE AND LIFE SCIENCES
AGRICULTURAL AND
APPLIED ECONOMICS
VIRGINIA TECH.

Agricultural & Applied
Economics
250 Drillfield Drive
Hutcheson Hall, Suite 208
Blacksburg, Virginia 24061
P: (540) 231-6301 F: (540)
231-7417

Dr. Susan Sumner, Associate Dean
College of Agriculture & Life Sciences
1060 Litton Reaves, VT
Blacksburg, VA 24061

March 26, 2019

Dear Dr. Sumner:

Please find attached documentation of our request in AAEC to create four new majors, by elevating three of our existing concentrations (options) to major status: Environmental Economics Management & Policy (EEMP), International Trade & Development (ITD), and Community Economic Development (CED). We are also submitting a fourth proposal to create a new major in Food & Health Systems Economics (FHSE).

Our current degree structure consists of two degrees: AGRIBUSINESS (AGRB) and APPLIED ECONOMIC MANAGEMENT (AEM). Underneath our AEM degree, we have a single major (AEM) with three concentrations/options: EEMP, ITD, CED.

Our *proposed* degree structure consists of the same two degrees (AGRB & AEM), with four new majors underneath the AEM degree: FHSE, EEMP, ITD, CED.

Rationale

Few high school graduates come to VT (or any university) with knowledge of "Agricultural Economics - AGECON" as a field of study and professional career. Hence, we attract most of our undergraduate majors via our introductory service courses to CALS and CLE/PATHWAYS.

However, even that process is confusing to enrolled VT students because our curricular programs concentrations/options are buried underneath our AEM degree/major, i.e., EEMP, ITD and CED are not listed on VT's academic majors website, nor is the term Applied Economic Management (AEM) very meaningful to students exploring majors. Therefore, we wish to elevate EEMP, ITD and CED to major status to more accurately reflect program content and facilitate recruitment.

Secondly, we also wish to create a timely new major focused on Food & Health Systems Economics (FHSE). We are excited about this new major for it will educate and prepare students for careers in both dimensions (production and distribution) of healthy food supply and demand systems, uniquely linking the two parameters essential to a safe and sustainable diet for consumers.

Though our current students consider themselves as majoring in EEMP, ITD or CED, this information is stated only on their transcript. Should our request be approved, our graduates will

be able to accurately claim that they majored in their area of concentration and have it confirmed on their diplomas.

Future students internal and external to VT will be more readily able to identify and understand what majors are available in AAEC at VT. With enhanced visibility, we also anticipate more VT students will see and take our courses for minors and as electives.

Under separate documentation, we are submitting our proposal and justification for each new major.

Students Serviced

AAEC currently educates 200+ undergraduate majors and 49 minors.

Resource Needs

No new resources are necessary to implement these changes (pay raises accepted!). Please find attached letters of support from all VT departments whose courses our students take.

Teach-out Plan

For discontinued options:

- How many students are enrolled in the options: ITD = 36, EEMP = 28, CED = 12.
- Approximate graduation term for those in the options: Spring 2023. *(Last term to graduate FALL 2023)*
- What is the last term to enroll for the options: Spring 2020 for current students; Fall 2019 or Spring 2020 for new students.
- How will the students get through, if they don't want to change to the major? Other than PATHWAYS courses, the required courses on the current versus new Checksheets are identical; plus, we will make substitutions as needed on a student-by-student basis.

For new majors:

- When is the first term to declare the new majors: *Summer 10-25-19/Amt* Fall 2020.
- When is the first graduation term for the new majors: *Winter 10-25-19/Amt* Spring 2022.

Administration

These major changes would be effective for all students graduating in 2022 and for those currently enrolled freshmen in the Class of 2022 who wish to convert their Checksheets and adjust their curricula accordingly (<20%).

If approved, we will:

- Post the information on our departmental website;
- Request Registrar authorization and ;
- Notify all current students via email;
- Educate CALS and VT Advisors formally and informally.

Sincerely,



Matthew Holt, PhD
Professor & Department Head



Mike Ellerbrock, PhD
Professor & Undergraduate Director

Virginia Polytechnic Institute & State University
College of Agriculture & Life Sciences
Bachelor of Science in Applied Economic Management
Environmental Economics, Management, and Policy Major (EEMP)
For Students Graduating in Calendar Year 2022 and Date of Entry under UG Catalog 2020-2021

Part I. UNIVERSITY, COLLEGE, AND DEPARTMENT PATHWAYS*

* The total number of credit hours will vary depending upon whether Pathways courses are used to meet specific requirements in Part II. Some Pathways courses may also fulfill departmental requirements, but the credit hours may not be counted twice.

Pathways Concepts (45 hours):

Concept 1 - Discourse – Foundational	ENGL 1105-1106	3____, 3____
Discourse – Advanced	COMM 2004	3____
Concept 2 – Critical Thinking in the Humanities	Any Concept 2 Courses	3____, 3____
Concept 3 – Reasoning in the Social Sciences	AAEC 1005, 1006 ¹	3____, 3____
Concept 4 – Reasoning in the Natural Sciences	Any Concept 4 Lecture Courses	3____, 3____
Concept 5 – Quantitative & Computational Thinking-Foundational	MATH 1025-1026 ²	3____, 3____
Quantitative & Computational Thinking-Advanced	*STAT 3615 ³	3____
Concept 6 – Critique & Practice in Design and the Arts-Design	Any Concept 6 Design Course	3____
Critique & Practice in Design and the Arts-Arts	Any Concept 6 Arts Course	3____
Concept 7 – Critical Analysis of Identity & Equity in the US	Any Concept 7 Course	3____

Part II. ENVIRONMENTAL ECONOMICS, MANAGEMENT AND POLICY MAJOR (EEMP)

A. Degree Core Courses (19 credit hours)

*AAEC 2434	Foundations of Agribusiness	3____
*AAEC 3004	Agricultural Production and Consumption Economics	3____
*AAEC 3024	Monetary and Global Issues in Applied Economics	3____
AAEC 3015	AAEC Internship	1____
*AAEC 3014 ⁴	Analytical Methods in Applied Economics	3____
ACIS 2115	Principles of Accounting	3____
* ENGL 3774 ⁵	Business Writing	3____

B. Major Core Courses (18 hours):

AAEC 3314	Environmental Law	3____
*AAEC 3324	Environment and Sustainable Development Economics	3____
*AAEC 4314	Environmental Economic Analysis and Management	3____
*AAEC 4324	Rural and Regional Development Policy	3____
ENSC 1015	Foundations of Environmental Science	3____
*FIN 3104 ⁶	Introduction to Finance	3____

C. Analytical Methods (2-3 hours)

Take 1 of:

*AAEC 4504	Agricultural Price and Market Analysis	2 or 3____
GEOG 2084 ⁷	Principles of Geographic Information Systems	
*AAEC 3514	Agricultural Futures and Options	
*AAEC 4804	Elementary Econometrics	
*ALS 4614	Watershed Assessment, Management, and Policy	

D. Restricted Electives -- 9 hours total (6 hours must be at the 3000 level or higher)

AAEC _____	_____	3____
AAEC _____	_____	3____
AAEC _____	_____	3____

Part III. AREA OF SPECIALIZATION AND FREE ELECTIVES

A. Area of Specialization (18 hours) – AAEC advisor must approve area of specialization courses and the student must file an *area of specialization* form with the AAEC undergraduate office. Students should consider minors or double majors. At least 9 hours must be at the 3000 level or higher (unless noted otherwise for a minor in another academic department).

Course		Course	
_____	3____	_____	3____
_____	3____	_____	3____
_____	3____	_____	3____

B. Free Electives (9 hours -Number needed to complete 120 hours)

_____	3____	_____	3____
_____	3____		

NOTES:

***Pre-requisites:** Some courses required for this major have pre-/co-requisites and/or enrollment requirements. Please refer to the Undergraduate Course Catalog or consult your advisor for information about pre-/co-requisites and enrollment requirements.
Program Total Hours: 120 credit hours required for graduation with this degree.

Foreign Language Requirement: Students who do not successfully complete at least two units of a single foreign language, classical language or American Sign Language during high school must successfully complete six semester hours of a single college level foreign or classical language at the college level. Such semester hours are in addition to those normally required for graduation. Please see the Undergraduate Catalog for details.

GPA: In major calculation is from all AAEC and ECON classes taken. An overall GPA of at least 2.0 is required to meet the University's minimum standard for good academic standing. Overall and in-major GPA's of at least 2.00 are required for graduation.

Satisfactory progress: By the end of the academic year in which the student has attempted 72 hours (including transfer, advanced placement, advanced standing and credit by examination), "satisfactory progress" will consist of 1) an overall GPA of at least 2.0; 2) at least 30 credits that apply to the Pathways to General Education, and 3) 9 semester credits of departmental requirements.

¹ Or take ECON 2005-2006: Principles of Economics

² Or take MATH 1225-1226: Calculus of a Single Variable. Students considering graduate school in applied economics are encouraged to take MATH 1225-1226.

³ Or STAT 3005

⁴ Or BIT 2406, or STAT 3006, or STAT 3616

⁵ Or take ENGL 3764: Technical Writing; or ENGL 3754: Advanced Composition.

⁶ Or ACIS 2116: Principles of Accounting.

⁷ May also take BSE 4344 Geographic Information Systems for Engineers.



Mathematics Department
225 Stanger Street
460 McBryde Hall
Blacksburg, VA 24061
Ph: (540) 231-6536
Fax: (540) 231-5960

February 26, 2019

Mike Ellerbrock, PhD
Professor and Undergrad Director
AAEC Dept, VT
218 Hutcheson Hall (0401)
Blacksburg, VA 24061

Dear Mike:

The Department of Mathematics supports the continued inclusion of

MATH 1025-1026: Elementary Calculus

as requirements in your three current options that you propose to elevate to majors

- *International Trade & Development,*
- *Environmental Economics Management & Policy,*
- *Community/Rural Economic Development.*

In addition, we support the inclusion of MATH 1025-1026 in the new major

- *Food & Health Systems Economics.*

We accept your analysis that we will require no new resources to teach these courses. We will, of course, monitor enrollments to see that this is the case

Best regards,

A handwritten signature in black ink, appearing to read 'R.C. Rogers'.

Robert C. Rogers
Professor and Associate Chair

White, Katie

From: Ellerbrock, Mike
Sent: Monday, February 18, 2019 11:59 AM
To: White, Katie
Subject: FW: Letters of Support

From: Easterwood, John <jceast@vt.edu>
Sent: Monday, February 18, 2019 11:55 AM
To: Ellerbrock, Mike <mebroch@vt.edu>
Subject: RE: Letters of Support

Mike, we are happy to have your students continue to take FIN 3104. Please note that our prerequisites for that course are ACIS 2115, BIT 2405 (or STAT 3005/06), and ECON 2005.
John

From: Ellerbrock, Mike <mebroch@vt.edu>
Sent: Thursday, February 14, 2019 3:23 PM
To: Easterwood, John <jceast@vt.edu>
Cc: Keown, Art <emily@vt.edu>; Holt, Matthew <mattholt@vt.edu>; Davis, George <georgedavis@vt.edu>; White, Katie <katiwhite@vt.edu>
Subject: Letters of Support

Dear John:

In AAEC, we are seeking Governance approval to elevate our three current undergraduate Options to Majors.

- *International Trade & Development (ITD),*
- *Environmental Economics Management & Policy (EEMP),*
- *Community/Rural Economic Development (C/RED).*

We need your support for allowing our students to continue taking:

FIN 3104.

In addition to elevating these three Options to Major status, we are also submitting a proposal for a fourth Major:

- Food & Health Systems Economics.

Therefore, we also need your support to allow our students into:

FIN 3104.

FYI – we do not anticipate any new resources will be needed.

Please let us know if you have any questions; otherwise, email us back to confirm your support by February 22nd if possible.



Department of Statistics
250 Drillfield Drive
Hutcheson Hall, 406-A
Blacksburg, Virginia 24061
P: (540) 231-5657 F: (540) 231-3863

February 15, 2019

To Whom It May Concern:

The Department of Statistics is happy to support the required and optional courses necessary to support the new Food & Health Systems Economics majors. These are International Trade & Development (ITD), Environmental Economics Management & Policy (EEMP), Community/Rural Economic Development (C/RED), and Food & Health Systems Economics (FHSE).

These new majors will require students to continue taking Biological Statistics (STAT 3615). In addition, students in the C/RED major may take Methods of Regression Analysis (STAT 4214) and/or Sample Survey Methods (STAT 4524) as electives.

We anticipate that the Statistics Department can continue providing these courses with no additional resources. If enrollment numbers are beyond expectations, or if the combined effects of other courses push the limits of our capacity, the level of resources required will have to be revisited.

Sincerely,

A handwritten signature in black ink, appearing to read 'David Higdon'.

David Higdon
Professor and Interim Head

White, Katie

From: Ellerbrock, Mike
Sent: Friday, February 15, 2019 11:05 AM
To: White, Katie
Subject: FW: FW: Letters of Support

Follow Up Flag: Follow up
Flag Status: Flagged

Good!

From: Douglas Cannon <dfcannon@vt.edu>
Sent: Friday, February 15, 2019 9:28 AM
To: Ellerbrock, Mike <mebroek@vt.edu>
Subject: Fwd: FW: Letters of Support

The Department of Communication supports the inclusion of COMM 2004: Public Speaking on Agriculture and Applied Economics checksheets for four proposed majors:

- Community/Rural Economic Development.
- Environmental Economics Management & Policy.
- Food & Health Systems Economics.
- International Trade & Development.

Teaching students from these four proposed majors will not require additional department resources.

Douglas F. Cannon, Ph.D., APR+M, Fellow PRSA
Assistant Head, Department of Communication
Virginia Polytechnic Institute and State University (Virginia Tech)

----- Forwarded message -----

From: Denton, Robert <rdenton@vt.edu>
Date: Thu, Feb 14, 2019 at 3:24 PM
Subject: FW: Letters of Support
To: Cannon, Douglas <dfcannon@vt.edu>

This should have gone to you...

Thanks,

Bob

VTVTVTVTVTVTVTVTVTVTVTVTVTVTVTVT

White, Katie

From: Maher, John
Sent: Thursday, February 14, 2019 3:37 PM
To: Ellerbrock, Mike
Cc: Holt, Matthew; Davis, George; White, Katie; Neece, Phyllis
Subject: RE: Letters of Support

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Mike, February 14, 2019

I support your students taking ACIS 2115 and no new resources will be needed. I cannot predict which semester your students will be able to take ACIS 2115 (i.e. Fall or Spring), but I support them taking the course. Good luck with your new majors.
Jack Maher

John J. (Jack) Maher
Department Head
Carroll Endowed Professor
Dept. of Accounting and Information Systems
Pamplin College of Business, Suite 3007, Virginia Tech
880 West Campus Drive
Blacksburg, VA 24061 USA

From: Ellerbrock, Mike <mebroek@vt.edu>
Sent: Thursday, February 14, 2019 3:21 PM
To: Maher, John <jmaher@vt.edu>
Cc: Holt, Matthew <mattholt@vt.edu>; Davis, George <georgedavis@vt.edu>; White, Katie <katiwhite@vt.edu>
Subject: Letters of Support

Dear Jack:

In AAEC, we are seeking Governance approval to elevate our three current undergraduate Options to Majors.

- *International Trade & Development (ITD),*
- *Environmental Economics Management & Policy (EEMP),*
- *Community/Rural Economic Development (C/RED).*

We need your support for allowing our students to continue taking:

ACIS 2115.

In addition to elevating these three Options to Major status, we are also submitting a proposal for a fourth Major:

- Food & Health Systems Economics.

Therefore, we also need your support to allow our students into:

ACIS 2115.

FYI – we do not anticipate any new resources will be needed.

Please let us know if you have any questions; otherwise, email us back to confirm your support by February 22nd if possible.

Thank You!

Mike Ellerbrock & Katie White

Mike Ellerbrock, PhD
Prof & Undergrad Dir
AAEC Dept, VT
218 Hutcheson Hall (0401)
Blacksburg, VA 24061
(540) 231-7722 Office
(540) 239-9996 Cell
(540) 552-4009 Home
mebroek@vt.edu



COLLEGE OF NATURAL
RESOURCES AND ENVIRONMENT
VIRGINIA TECH.

Department of Geography
115 Major Williams Hall (0115)
220 Stanger Street
Blacksburg, Virginia 24061
(540) 231-7557
E-mail: geography@vt.edu
geography.vt.edu

February 19, 2019

Dear Dr. Ellebrock,

I am writing to indicate my support of your inclusion of GEOG 2084 Principles of GIS to be included in the following AAEC majors:

- International Trade & Development (ITD),
- Environmental Economics Management & Policy (EEMP),
- Community/Rural Economic Development (C/RED).

No new resources are needed.

Sincerely,

A handwritten signature in black ink, appearing to read 'T. Crawford'.

Tom Crawford
Professor and Chair
Department of Geography

White, Katie

From: Matt Eick <eick@vt.edu>
Sent: Thursday, February 14, 2019 3:35 PM
To: Ellerbrock, Mike
Cc: Stewart, Jen; Holt, Matthew; Davis, George; White, Katie
Subject: Re: Letters of Support

Follow Up Flag: Follow up
Flag Status: Flagged

Mike:

We support including ENSC 1015 in your undergraduate options. *majors*

Cheers

Matt

#####

Matthew Eick
Professor of Environmental Soil Chemistry
School of Plant and Environmental Sciences
185 Ag Quad Lane
236 Smyth Hall
Virginia Tech
Blacksburg, VA 24061
540-231-8943

"People are persuaded to spend money we don't have; on things we don't need; to create impressions that won't last; on people we don't care about."

Tim Jackson

On Feb 14, 2019, at 3:32 PM, Ellerbrock, Mike <mebrock@vt.edu> wrote:

Dear Matt & Jen:

In AAEC, we are seeking Governance approval to elevate our three current undergraduate Options to Majors.

- *International Trade & Development (ITD),*
- *Environmental Economics Management & Policy (EEMP),*
- *Community/Rural Economic Development (C/RED).*

From: Ellerbrock, Mike <mebroock@vt.edu>
Sent: Tuesday, February 26, 2019 1:20 PM
To: White, Katie <katiwhite@vt.edu>
Cc: Eska, Joe <eska@vt.edu>
Subject: FW: Letters of Support

Katie,

FYI ... and please respond to Joe with enrollment estimates.

Thanks, Mike

From: Joe Eska <eska@vt.edu>
Sent: Tuesday, February 26, 2019 11:36 AM
To: Ellerbrock, Mike <mebroock@vt.edu>
Subject: Re: Letters of Support

Hello Mike,

For the shift of your three Options to Majors, we are glad to have you continue having your students take ENGL 1105, 1106, and 3774. Can you tell me how many students you would expect to direct to 3774 per semester for your new Food & Health Systems Economics Major?

Thanks,

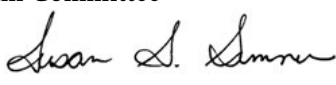


COLLEGE OF AGRICULTURE AND LIFE SCIENCES
ACADEMIC PROGRAMS
VIRGINIA TECH.

Office of Academic Programs
175 West Campus Dr. (0334)
Litton-Reaves, Suite 1060
Blacksburg, Virginia 24061
P: (540) 231-6503 F: (540) 231-6741
calsap@vt.edu

MEMORANDUM

TO: CALS Curriculum Committee

FROM: Susan Sumner, 
Associate Dean and Director of Academic Programs

DATE: March 28, 2019

SUBJECT: **ALS 4614, Watershed Assessment, Management, and Policy**

I am in support of ALS 4614, Watershed Assessment, Management, and Policy, being an elective course on the Environmental Economics, Management, and Policy (EEMP) major checksheet. This course is already listed on EEMP option checksheet, and this will not require any new resources.

White, Katie

From: Ellerbrock, Mike
Sent: Friday, February 15, 2019 11:08 AM
To: White, Katie
Subject: FW: Letters of Support

Follow Up Flag: Follow up
Flag Status: Completed

From: Bosch, Darrell <bosch@vt.edu>
Sent: Friday, February 15, 2019 8:52 AM
To: Ellerbrock, Mike <mebrock@vt.edu>
Cc: Schoenholtz, Stephen <schoenhs@vt.edu>
Subject: RE: Letters of Support

I confirm my support.

Darrell Bosch
Professor
Department of Agricultural and Applied Economics
Virginia Tech
Blacksburg, VA 24061
540-231-5265

From: Ellerbrock, Mike <mebrock@vt.edu>
Sent: Thursday, February 14, 2019 3:40 PM
To: Bosch, Darrell <bosch@vt.edu>; Schoenholtz, Stephen <schoenhs@vt.edu>
Cc: Holt, Matthew <mattholt@vt.edu>; White, Katie <katiwhite@vt.edu>; Sumner, Susan <sumners@vt.edu>; Slocum, Stephanie <sslocum@vt.edu>
Subject: Letters of Support

Dear Darrell & Stephen:

In AAEC, we are seeking Governance approval to elevate our three current undergraduate Options to Majors.

- *International Trade & Development (ITD),*
- *Environmental Economics Management & Policy (EEMP),*
- *Community/Rural Economic Development (C/RED).*

We need your support for allowing our students to continue taking **ALS/NR 4614** as an elective for our EEMP option, not a required course.

FYI – we do not anticipate any new resources will be needed.

Please let us know if you have any questions; otherwise, email us back to confirm your support by February 22nd if possible.

White, Katie

*Don't need
this from
NR since
ALS is
home dept*

From: Schoenholtz, Stephen
Sent: Tuesday, February 19, 2019 12:02 PM
To: Ellerbrock, Mike; Bosch, Darrell
Cc: Holt, Matthew; White, Katie; Sumner, Susan; Slocum, Stephanie
Subject: RE: Letters of Support

Hello Mike,

As co-instructor of record for ALS/NR 4614 Watershed Assessment, Management, and Policy I approve having this course listed as an elective for the Environmental Economics Management and Policy major in AAEC. Please note that effective summer I 2019 the course descriptor will be changed to ALS/WATR 4614.

Best regards,
Stephen

Stephen H. Schoenholtz, Ph.D.

Director, Virginia Water Resources Research Center (MC0444)

Professor, Department of Forest Resources and Environmental Conservation

Cheatham Hall, Suite 210, Virginia Tech

310 West Campus Drive

Blacksburg, VA 24061-1036

540-231-0711

stephen.schoenholtz@vt.edu

Water Center: vwrrc.vt.edu

Research Lab: water.vwrrc.vt.edu

Water Degree: frec.vt.edu/waterdegree

From: Ellerbrock, Mike <mebroock@vt.edu>

Sent: Thursday, February 14, 2019 3:40 PM

To: Bosch, Darrell <bosch@vt.edu>; Schoenholtz, Stephen <schoenhs@vt.edu>

Cc: Holt, Matthew <mattholt@vt.edu>; White, Katie <katiwhite@vt.edu>; Sumner, Susan <sumners@vt.edu>; Slocum, Stephanie <sslocum@vt.edu>

Subject: Letters of Support

Dear Darrell & Stephen:

In AAEC, we are seeking Governance approval to elevate our three current undergraduate Options to Majors.

- *International Trade & Development (ITD),*
- *Environmental Economics Management & Policy (EEMP),*
- *Community/Rural Economic Development (C/RED).*

**Virginia Polytechnic Institute & State University College of
Agriculture & Life Sciences
Bachelor of Science in Applied Economic Management (BS AEM)
Environmental Economics, Management, and Policy Option (EEMP)
For Students Graduating in Calendar Year 2020**

Part I. UNIVERSITY, COLLEGE, AND DEPARTMENT CLE*

* The total number of credit hours will vary depending upon whether Curriculum for Liberal Education courses are used to meet specific requirements in Part II. Some Curriculum for Liberal Education courses may also fulfill departmental requirements, but the credit hours may not be counted twice.

(Area 1)	ENGL 1105-1106	Freshman English	3____, 3____
(Area 2)	(Ideas, Cultural Traditions, and Values)		3____, 3____
(Area 3)	AAEC 1005-1006 ¹	Econ. of the Food and Fiber System	3____, 3____
(Area 4)	(Scientific Reasoning and Discovery)	Lecture	3____, 3____
		Lab	1____, 1____
(Area 5)	MATH 1525-1526 ²	Elem. Calculus with Matrices	3____, 3____
(Area 6)	(Creativity and Aesthetic Experience)		1____
(Area 7)	(Critical Issues in a Global Context)		3____
	ACIS 2115	Principles of Accounting	3____
	FIN 3104 ³	Introduction to Finance	3____
	COMM 2004 or	Public Speaking	
	ALCE 3634 ⁴	Comm. Ag. & Life Sci. in Speaking	3____
	ENGL 3774 ⁵	Business Writing	3____

Part II. ENVIRONMENTAL ECONOMICS, MANAGEMENT AND POLICY OPTION (EEMP)

A. Disciplinary Core Courses (25 credit hours)

AAEC 2434 ⁶	Foundations of Agribusiness	3____
AAEC 3004	Agricultural Production and Consumption Econ.	3____
AAEC 4324	Rural and Regional Development Policy	3____
AAEC 3314	Environmental Law (also Area 7 Class)	3____
AAEC 3324	Environment and Sustainable Dev. Economics	3____
AAEC 4314	Environmental Economic Analysis and Mgmt.	3____
AAEC 3024	Monetary and Global Issues in Applied Econ.	3____
ENSC 1015	Foundations of Environmental Science	3____
AAEC 3015	AAEC Internship	1____

B. Analytical Methods (8-9 hours)

STAT 3005, STAT 3615 or BIT 2405 Statistical Methods or Quantitative Methods	3____
and AAEC 3014 ⁷	Analytic Methods in Applied Economics 3____
Take 1 of:	
AAEC 4504	Agricultural Price and Market Analysis 2 or 3____
GEOG 2084 ⁸	Introduction to Geographic Information Systems
AAEC 3514	Agricultural Futures and Options
AAEC 4804	Elementary Econometrics
ALS 4614	Watershed Assessment, Management, and Policy

C. Restricted Electives -- 9 hours total (6 hours must be at the 3000 level or higher)

AAEC _____	3____
AAEC _____	3____
AAEC _____	3____

Part III. AREA OF SPECIALIZATION AND FREE ELECTIVES

A. Area of Specialization (18 hours) – AAEC advisor must approve area of specialization courses and the student must file an *area of specialization* form with the AAEC undergraduate office. Students should consider minors or double majors. At least 15 hours must be at the 3000 level or higher (unless noted otherwise for a minor in another academic department).

Course		Course	
_____	3____	_____	3____
_____	3____	_____	3____
_____	3____	_____	3____

B. Free Electives (number needed to complete 120 hours)

_____	3____	_____	3____
_____	3____	_____	3____

NOTES:

Pre-requisites: Some courses required for this major have prerequisites. Please refer to the Undergraduate Course Catalog or consult your advisor for information about prerequisites.

Foreign Language Requirement: Students who do not successfully complete at least two units of a single foreign language, classical language or American Sign Language during high school must successfully complete six semester hours of a single college level foreign or classical language at the college level. Such semester hours are in addition to those normally required for graduation. Please see the Undergraduate Catalog for details.

GPA: In major calculation is from all AAEC and ECON classes taken. An overall GPA of at least 2.0 is required to meet the University's minimum standard for good academic standing. Overall and in-major GPA's of at least 2.00 are required for graduation.

Satisfactory progress: By the end of the academic year in which the student has attempted 72 hours (including transfer, advanced placement, advanced standing and credit by examination), "satisfactory progress" will consist of 1) an overall GPA of at least 2.0; 2) at least 24 credits that apply to the University Curriculum for Liberal Education, and 3) 9 semester credits of departmental requirements.

¹ Or take ECON 2005-2006: Principles of Economics

² Or take MATH 1025-1026: Elem. Calculus; or MATH 1225-1226: Calculus of a Single Variable. Students considering graduate school in applied economics are encouraged to take MATH 1225-1226.

³ Or take ACIS 2116: Principles of Accounting.

⁴ Or take COMM 2014: Speech Communication; or COMM 3134: Argumentation and Decision-Making.

⁵ Or take ENGL 3764: Technical Writing; or ENGL 3754: Advanced Composition.

⁶ Or AAEC 2104: Personal Financial Planning.

⁷ Or BIT 2405-2406, or STAT 3005-3006 or STAT 3615-3616.

⁸ Or BSE 4344: Geographic Information Systems for Engineers.