

Proposal for a new major in Plant Science

To: CALS Undergraduate Curriculum Committee, Commission on Undergraduate Studies and Policies, University Council, University Curriculum Committee

From: Benjamin Tracy, Associate Director Undergraduate Programs, School of Plant and Environmental Sciences.

Date: 10.16.20

The School of Plant and Environmental Sciences (SPES) with the cooperation of the College of Agriculture and Life Sciences is proposing a new major: Plant Science. The new major will be housed under the B.S. degree in Plant Science.

Need for program:

We may need to double crop production by 2050 to feed everyone on the planet. Reaching this level of production without damaging our environment represents one of the greatest challenges facing humanity. To meet this challenge, a new generation of crops must be developed. They need to be productive, stress tolerant, nutritious, disease resistant, and safe for human consumption and the environment. Students in the new Plant Science major will gain the knowledge and skills needed to develop and protect these crops to help solve this grand challenge. The proposed major will be housed under a new B.S. degree in Plant Science recently put forward by the School of Plant and Environmental Sciences (SPES).

The School of Plant and Environmental Sciences (SPES) was formed in July 2018 by merging three departments: Crop and Soil Environmental Science (CSES), Horticulture (HORT), and Plant Pathology, Physiology, and Weed Science (PPWS). This merger prompted the newly integrated faculty to convene and discuss options for the undergraduate programs, which consisted of three B.S. degrees spanning the three former departments. From these discussions, it was determined that the merger of two degrees, the B.S. in Crop and Soil Environmental Sciences and the B.S. in Horticulture, into one B.S. in Plant Science degree would best serve the students by providing a unified, integrated curriculum with a wider breadth of subject material and expertise that would make graduates of the program more competitive for jobs in the public and private sector. The discontinuance of the Crop and Soil Environmental Sciences degree will eliminate an option in Crop Genetics and Breeding. Creation of the Plant Science major was intended to provide a home for the Crop Genetics and Breeding students and expand their educational opportunities by bringing in additional pathology and biotechnology expertise from faculty in the former PPWS and HORT departments.

Program Requirements:

Virginia Tech Pathways to General Education (45 credit hours)	Credits
Discourse	9
ENGL 1105: First-Year Writing	(3)
ENGL 1106: First-Year Writing	(3)
Select from approved courses	(3)
Critical Thinking in the Humanities	6
Reasoning in the Social Sciences	6
AAEC 1005: Economic of the Food and Fiber System, <i>Or</i> ECON 2005: Principles of Economics	(3)
Selection of approved course	(3)
Reasoning in the Natural Sciences	6
CHEM 1035: General Chemistry	(3)
CHEM 1036: General Chemistry	(3)
Quantitative and Computational Thinking	9
MATH 1025: Elementary Calculus	(3)
MATH 1026: Elementary Calculus	(3)
STAT 3615: Biological Statistics	(3)
Critique and Practice in Design and the Arts	6
Critical Analysis of Identity and Equity in the United States	3

<u>Degree Core Courses (25 credit hours)</u>	Credits
ALCE 3624: Communicating Agriculture and Life Sciences in Writing, <i>Or</i> ALCE 3634: Communicating Agriculture and Life Sciences in Speaking	3
ALS 1234: CALS First Year Seminar	1
BIOL 1105: Principles of Biology	3
BIOL 1106: Principles of Biology	3
ENSC 1015: Foundations of Environmental Science	3
HORT/BIOL 2304: Plant Biology	3
PPWS 2104: Plants, Genes, and People	3
PPWS 4104: Plant Pathology	4
SPES 4864: Plant Science Capstone	2

<u>Plant Science Major Core Courses (22-23 credits)</u>	Credits
BCHM 3114: Biochemistry for Biotechnology and the Life Sciences, <i>Or</i> BCHM 4115: General Biochemistry	4
CHEM 1045: General Chemistry Laboratory	1
CHEM 1046: General Chemistry Laboratory	1
CHEM 2535: Organic Chemistry	3

CHEM 2536: Organic Chemistry	3
CHEM 2545: Organic Chemistry Laboratory	1
CHEM 2546: Organic Chemistry Laboratory	1
CSES 2444: Agronomic Crops, <i>Or</i> HORT 2224: Horticulture Science and Industry	2-3
CSES 4144: Plant Breeding and Genetics	3
CSES 4344: Crop Physiology and Ecology	3

Plant Science Major Restricted Electives (choose 15 credits from below list)

ALS 3404: Ecological Agriculture: Theory and Practice	3
BCHM 2114: Biochemical Calculations	3
BCHM/APSC 4054: Genomics	3
BCHM 4116: General Biochemistry	3
BIOL 2004: Genetics	3
BIOL 2104: Cell and Molecular Biology	3
BIOL 2134: Cell Function Differentiation	3
BIOL 4134: Evolutionary Genetics	3
BIOL 4334: Chemical Ecology	3
CSES/ENSC 3134: Soils in the Landscape	3
CSES/HORT 3444: World Crops and Cropping Systems	3
CSES/FREC 4334: Principles and Practices of Agroforestry	3
CSES 4544: Forage Crop Ecology	3
HORT 2184: Plants, Places, and Cultures in a Global Context	3
HORT 2234: Environmental Factors in Horticulture	3
HORT 4064: Soil Microbiology	3
HORT 4794: Medicinal Plants and Herbs	3
PPWS 2004: Mysterious Mushrooms, Malicious Molds	3
PPWS 2754: Weeds that Shape Our World	3
PPWS 4154: Plant Problem Diagnosis	3
PPWS 4604: Biological Invasions	3
PPWS 4994: Undergraduate Research	1-3

Free Electives (13-15 credits to reach 120 cr. minimum)

Whom program will serve:

The new Plant Science degree will enroll approximately 160 students in Fall 2021. We predict the Plant Science major will enroll between 25-30 students initially and increase by 10-20% over the next 5 years. Some students will come from the former Crop Breeding and Genetics option, which was offered under the Crop Soil and Environmental Sciences degree. Other students interested in Plant Pathology and Crop Physiology will gravitate towards the new major. These

CHEM 2536: Organic Chemistry	3
CHEM 2545: Organic Chemistry Laboratory	1
CHEM 2546: Organic Chemistry Laboratory	1
CSES 2444: Agronomic Crops, <i>Or</i>	
HORT 2224: Horticulture Science and Industry	2-3
CSES 4144: Plant Breeding and Genetics	3
CSES 4344: Crop Physiology and Ecology	3

Plant Science Major Restricted Electives (choose 15 credits from below list)

ALS 3404: Ecological Agriculture: Theory and Practice	3
BCHM 2114: Biochemical Calculations	3
BCHM/APSC 4054: Genomics	3
BCHM 4116: General Biochemistry	3
BIOL 2004: Genetics	3
BIOL 2104: Cell and Molecular Biology	3
BIOL 4134: Evolutionary Genetics	3
BIOL 4334: Chemical Ecology	3
CSES/ENSC 3134: Soils in the Landscape	3
CSES/HORT 3444: World Crops and Cropping Systems	3
CSES/FREC 4334: Principles and Practices of Agroforestry	3
CSES 4544: Forage Crop Ecology	3
HORT 2184: Plants, Places, and Cultures in a Global Context	3
HORT 2234: Environmental Factors in Horticulture	3
HORT 4064: Soil Microbiology	3
HORT 4794: Medicinal Plants and Herbs	3
PPWS 2004: Mysterious Mushrooms, Malicious Molds	3
PPWS 2754: Weeds that Shape Our World	3
PPWS 4154: Plant Problem Diagnosis	3
PPWS 4604: Biological Invasions	3
PPWS 4994: Undergraduate Research	1-3

Free Electives (13-15 credits to reach 120 cr. minimum)

Whom program will serve:

The new Plant Science degree will enroll approximately 160 students in Fall 2021. We predict the Plant Science major will enroll between 25-30 students initially and increase by 10-20% over the next 5 years. Some students will come from the former Crop Breeding and Genetics option, which was offered under the Crop Soil and Environmental Sciences degree. Other students interested in Plant Pathology and Crop Physiology will gravitate towards the new major. These

students could not be accommodated by the former Plant Pathology, Physiology and Weed Science Department as it did not have an undergraduate program previous to formation of SPES. The major will benefit Virginia Tech students who want to learn the principles of plant and molecular biology, biochemistry, and genetics as they apply to development new crop varieties and plant pathology. The Plant Science major is the only one of its kind offered at Virginia Tech and in the state.

The U.S. Bureau of Labor Statistics projects agricultural and food scientists is projected to grow 7 percent from 2018 to 2028, faster than the average for all occupations. Employment of agricultural and food scientists is projected to grow as research into agricultural production methods and techniques continues. The major will prepare students for private and public sector careers in this sector related to areas of plant breeding and biotechnology, pharmaceuticals, food science, and plant protection. Some examples of employment and related duties are listed below:

- Develop and select plants for better nutrition, greater insect, disease or pesticide resistance
- Breed and engineer plants to increase crop yield by increasing the efficiency of cellular processes
- Create new and improved resources for pharmaceuticals, natural medicine, or plant-based biofuels
- Analyze plant and soil samples for pathogens, chemical pesticides/fertilizers
- Diagnose and identify plant pathogens and methods of treatment

Resource needs:

Virginia Tech and the School of Plant and Environmental Sciences have all of the faculty, classified support staff, equipment, library, and other resources necessary to administer the new Major in Plant Science. No new faculty, staff or equipment will be requested to support the major.

Administration:

The Plant Science major will be administered by the School of Plant and Environmental Sciences within the College of Agriculture and Life Sciences. First student enrollment is anticipated for Fall 2021 with first graduation Spring 2025. Students currently in the Crop Breeding and Genetics option will be allowed to complete their existing program by Spring 2025. No students will be allowed to enroll in the Crop Breeding and Genetics Option after Spring 2021, and SPES will communicate these changes to enrolled students.



COLLEGE OF AGRICULTURE AND LIFE SCIENCES
SCHOOL OF PLANT AND
ENVIRONMENTAL SCIENCES
VIRGINIA TECH.

School of Plant and
Environmental Sciences
185 Ag. Quad Lane
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Blacksburg, Virginia 24061
bftracy@vt.edu

To: CALS Curriculum Committee

From: Benjamin Tracy, Associate Director for Undergraduate Programs- School of Plant and Environmental Sciences (SPES)

Date: 16 Oct 2020

Re: Plant Science (PLSC) major

The School of Plant and Environmental Sciences (SPES) seeks to merge two-degree programs and create a new Bachelor of Science (B.S.) in Plant Science. The two programs to be merged include the B.S. in Crop and Soil Environmental Sciences and the B.S. in Horticulture. The merged degree program in Plant Science will offer four majors: 1) Crop and Soil Sciences (CSSC), 2) Landscape Design and Turfgrass Science (LTS), 3) Plant Science (PLSC), and 4) Environmental Horticulture (EVHT). The School of Plant and Environmental Sciences supports inclusion of the new Plant Science major to be housed under the new Plant Science degree.

Sincerely,

Benjamin F Tracy, PhD
Associate Director of Undergraduate Programs

**College of Agriculture and Life Sciences
School of Plant and Environmental Sciences
Bachelor of Science in Plant Science
Major in Plant Science
For students entering under UG catalog 2021-2022**

**Pathways to General Education (44-47 credits) Concept 1 –
Discourse (9 credit hours)**

1F – Foundational

- ____(3) ENGL 1105 First-Year Writing – F, S
____(3) ENGL 1106 First-Year Writing – F, S, SI, SII

1A – Advanced/Applied

- ____(3) – F, S, W, SI, SII

Concept 2 – Critical Thinking in the Humanities (6 credits)

- ____(3) – F, S, W, SI, SII
____(3) – F, S, W, SI, SII

Concept 3 – Reasoning in the Social Sciences (6 credits)

- ____(3) AAEC 1005 Econ Food Fiber Sys or ECON 2005 Principles of
Economics – F, S
____(3) – F, S, W, SI, SII

Concept 4 – Reasoning in the Natural Sciences (6 credits)

- ____(3) CHEM 1035: General Chemistry* – F, S, SI, SII
____(3) CHEM 1036: General Chemistry* – F, S, SI, SII

Concept 5 – Quantitative and Computational Thinking (11 credits)

5f – Foundational (8 credits)

- ____(3) MATH 1025: Elementary Calculus – F, S, SI, SII
____(3) MATH 1026: Elementary Calculus – F, S, SI, SII

5a – Advanced/Applied (3 credits)

- ____(3) STAT 3615 Biological Statistics* – F, S

Concept 6 – Critique and Practice in Design and the Arts (6 credits)

6d – Design

- ____(3) – F, S, W, SI, SII

6a – Arts

- ____(3) – F, S, W, SI, SII

**Concept 7 – Critical Analysis of Identity and Equity in the United
States (3 credits)** (may be double-counted with another Pathways concept)

- ____(3) – F, S, W, SI, SII

Plant Science Degree Core Requirements (25 credits)

- ____(1) ALS 1234: CALS First Year Seminar – F
____(3) ALCE 3634: Comm Ag & Life Sci in Speaking – F, S
____or ALCE 3624: Comm Agriculture in Writing – F, S
____(3) BIOL 1105: Principles of Biology – F, W, SI
____(3) BIOL 1106: Principles of Biology – F, W, SI
____(3) ENSC 1015: Found Environmental Sci – F
____(3) HORT/BIOL 2304: Plant Biology* – F
____(3) PPWS 2104: Plants, Genes, and People* - F
____(4) PPWS 4104: Plant Pathology – F
____(2) SPES 4864: Plant Science Capstone* - TBD

Plant Science Major Requirements (minimum 24-26 credits)

- ____(3 or 4) BCHM 3114 Biochem for Biotech* - F
____or____BCHM 4115: General Biochemistry* - F
____(1) CHEM 1045: General Chemistry Laboratory* – F, S, SI, SII
____(1) CHEM 1046: General Chemistry Laboratory* – S, SI, SII
____(3) CHEM 2535: Organic Chemistry* – F, S, SI
____(1) CHEM 2545: Organic Chemistry Laboratory* – F, S, SI
____(3) CHEM 2536: Organic Chemistry* - F, S
____(1) CHEM 2546: Organic Chemistry Laboratory* - S
____(2 or 3) CSES 2444: Agronomic Crops -F
____or HORT 2224: Horticulture Science & Industr - F
____(3) CSES 4144 Plant Breeding and Genetics - S
____(3) CSES 4344 Crop Physiology and Ecology - S

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Key:

F – Fall
S – Spring
W – Winter
SI – Summer, Part I
SII – Summer, Part II

**College of Agriculture and Life Sciences
School of Plant and Environmental Sciences
Bachelor of Science in Plant Science
Major in Plant Science
For students entering under UG catalog 2021-2022**

Plant Science Major Restricted Electives (Choose 15 credits from list below)

- ___(3) ALS 3404: Ecological Agriculture: Theory and Practice
- ___(3) BCHM 2114: Biochemical Calculations* - S
- ___(3) BCHM/APSC 4054: Genomics* - F
- ___(3) BCHM 4116: General Biochemistry* - S
- ___(3) BIOL 2004: Genetics* – F, S
- ___(3) BIOL 2104: Cell and Molecular Biology
- ___(3) BIOL 2134: Cell Function Differentiation* – F, S
- ___(3) BIOL 4134: Evolutionary Genetics *- S
- ___(3) BIOL 4334: Chemical Ecology* - S
- ___(3) CSES/ENSC 3134: Soils in the Landscape* - S
- ___(3) CSES/HORT 3444: World Crops & Systems* – S
- ___(3) CSES/FREC 4334: Agroforestry - F
- ___(3) CSES 4544: Forage Crop Ecology - S
- ___(3) HORT 2184: Plants Places Culture Globally – S
- ___(3) HORT 2234: Envir Factors in Hort - S
- ___(3) HORT 4064: Soil Microbiology* - F

- ___(3) HORT 4794: Medicinal Plants and Herbs* - F
- ___(3) PPWS 2004: Mysterious Mushrooms & Molds - S
- ___(3) PPWS 2754: Weeds that Shape Our World - F
- ___(3) PPWS 4154: Plant Problem Diagnosis* - F
- ___(3) PPWS 4604: Biological Invasions* - F
- ___(1-3) PPWS 4994: Undergraduate Research – F, S

Free Electives (to reach 120 Total Credit Hours)

___ () _____

Note:

Total Hours Required: 120

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor

Satisfactory Progress:

By the end of the academic year in which the student has attempted 60 credits (including transfer, advanced placement, advanced standing and credit by examination), "satisfactory progress" toward a BS PLSC degree will include:

Passing the following:

- At least 24 credits that apply to the Pathways to General Education
- CHEM 1035 and 1036
- ALS 1234
- 6 credits of Math

GPA Requirements:

- Overall GPA: 2.0 (each semester in order to be in good academic standing)
- In-major GPA: 2.0 (by the time the student graduates)
 - Includes classes in: CSES, HORT, and PPWS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Key:

F – Fall
S – Spring
W – Winter
SI – Summer, Part I
SII – Summer, Part II



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for revised majors

3 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Ellerbrock, Mike" <mebroek@vt.edu>

Wed, Jan 15, 2020 at 7:20 AM

Hello Mike- You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. Many of these courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the revised majors are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben

Pathways Reasoning in the Social Sciences

AAEC: 1105 Econ Food Fiber (all majors)

Crop and Soil Science Major

Core Courses

AAEC 2434: Foundations of Agribusiness

Restricted Electives

AAEC/FIN 2104: Personal Financial Planning

AAEC 3004: Agricultural Production and Consumption Economics

AAEC 3314: Environmental Law

AAEC 3504: Marketing Agricultural Products

AAEC 3604: Agricultural Law

Landscape Design and Turfgrass Science Major

Core Courses

AAEC 2434: Foundations of Agribusiness

Environmental Horticulture Major

Core Courses

AAEC 2434: Foundations of Agribusiness

AAEC/MGT 3454: Small Business Management & Entrepreneurship

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Benjamin F. Tracy, PhD
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Office Ph: 540.231.8259



Ellerbrock, Mike <mebroock@vt.edu>

Wed, Jan 15, 2020 at 10:07 AM

To: "Tracy, Benjamin F." <bftracy@vt.edu>

Cc: "Holt, Matthew" <mattholt@vt.edu>, "White, Katie" <katiwhite@vt.edu>, "Norton, George" <gnorton@vt.edu>, "Stephenson, Kurt" <kurts@vt.edu>, "Isengildina Massa, Olga" <oimassa@vt.edu>, "Stewart, Shamar" <stewartls@vt.edu>

Hi Ben,

Yes – we always welcome your students in these AAEC courses.

Nice doing business with you!

Mike

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>

Wed, Jan 15, 2020 at 12:46 PM

To: "Ellerbrock, Mike" <mebroock@vt.edu>

Many thanks again, Mike!

[Quoted text hidden]



Benjamin F. Tracy <bfracy@vt.edu>

ALCE courses in new Plant Science degree

Friedel, Curtis <cfriedel@vt.edu>

Mon, Dec 2, 2019 at 12:39 PM

To: "Tracy, Benjamin F." <bfracy@vt.edu>

Hi Ben,

Sorry for my delay in getting back to you. Yes, we approve of including ALCE 3624 Comm. in Ag. Writing OR ALCE 3634 Comm. in Ag. Life Sci Speaking, in the core of the new merged degree program in Plant Science. Based on this enrollment projection estimate, we would not need any additional resources.

I would also add, for future planning, we are in process of having both courses approved for the Pathways general education curriculum in Discourse (1a).

Respectfully,

-Curt

Curtis R. Friedel, Ph.D.

Associate Professor | Undergraduate Program Director

Department of Agricultural, Leadership, & Community Education (0343)

Virginia Tech | 214-C Litton-Reaves Hall

[175 West Campus Drive, Blacksburg, VA 24061](#)

[Ph: \(540\) 231-8177](tel:5402318177) | email: cfriedel@vt.edu

<http://www.alce.vt.edu/student-info/undergraduate.html>

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

BHCM courses in new Plant Science Degree

3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Mon, Nov 25, 2019 at 3:28 PM

To: zhujin@vt.edu

Dear Dr. Zhu - I am currently Undergraduate Program Director in the School of Plant and Environmental Sciences. We are in the process of creating a merged degree in Plant Science that will contain 1 new, and 3 revised majors (current curriculum structure attached). We are requesting permission to include the courses below on our new checksheets. If you agree to this, a response via email would be fine.

Of course, if there are any questions or concerns please let me know.

Courses:

BCHM 3114 Biochem for Biotech (required for Plant Science major - projected enrollment increase ~ 5-10 students/yr)


BCHM 2114 - Biochemical Calculations (Restricted elective - projected enrollment increase - 2-3 students/yr.)

BCHM 4054 - Genomics (Restricted elective - projected enrollment increase - 2-3 students/yr.)

Regards,
Ben Tracy

Benjamin F. Tracy, PhD
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Office Ph: 540.231.8259



 Proposed Plant Science curriculum 11.25.19.xlsx
22K

zhujin@vt.edu <zhujin@vt.edu>

Wed, Nov 27, 2019 at 9:25 AM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Hi Ben,

You have our permission to include the courses on your checksheets.

Happy Thanksgiving.

Jinsong

Jinsong Zhu

Professor

Department of Biochemistry

Virginia Tech

Blacksburg, VA 24061

540-231-3841

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>
To: zhujin@vt.edu

Wed, Nov 27, 2019 at 9:45 AM

Thank you, you too!

[Quoted text hidden]

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[Quoted text hidden]

To: Benjamin Tracy, Associate Director Undergraduate Programs, School of Plant and Environmental Sciences

From: Richard Walker, Associate Department Head, Biological Sciences

Re: Inclusion of BIOL courses on SPES checksheets

Date: November 30, 2019

The Department of Biological Sciences supports inclusion of the following BIOL courses as requested by the School of Plant and Environmental Sciences. Please note seat availability in these courses is dependent on continued funding support from the College of Science and the university.

Plant Science Degree Core

BIOL 1105 Principles of Biology

Plant Science Major requirement

BIOL 1106 Principles of Biology

Crop and Soil Science Major Restricted Electives

BIOL 1106 Principles of Biology

BIOL 2804 Ecology

Plant Science Major Restricted Electives

BIOL 2004 Genetics

BIOL 2134 Cell Function and Differentiation

BIOL 4134 Evolutionary Genetics

BIOL 4334 Chemical Ecology



Benjamin F. Tracy <bfracy@vt.edu>

CHEM courses in new Plant Science degree3 messages

Benjamin F. Tracy <bfracy@vt.edu>
To: Patricia Amateis <pamateis@vt.edu>

Mon, Nov 25, 2019 at 4:35 PM

Dear Patricia - I am currently Undergraduate Program Director in the School of Plant and Environmental Sciences. We are in the process of creating a merged degree in Plant Science that will contain 1 new, and 3 revised majors (current curriculum structure attached). We are requesting permission to include the courses below on our new checksheets. If you agree to this, a response via email would be fine.

Of course, if there are any questions or concerns please let me know.

Thanks!
Ben

Courses:
Pathways:
CHEM 1035, 1036 General Chemistry (required for 2 majors - projected enrollment increase 5-10 students/yr.)


Major Requirements:
CHEM 1045, 1046 General Chemistry Lab (required for 2 majors - projected enrollment increase 5-10 students/yr.)

CHEM 2535, 2536 Organic Chemistry (required for 1 major - projected enrollment increase 5-10 students/yr.)
CHEM 2545, 2546 Organic Chemistry Lab (required for 1 major - projected enrollment increase 5-10 students/yr.)

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Benjamin F. Tracy, PhD
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Office Ph: 540.231.8259



 Proposed Plant Science curriculum 11.25.19.xlsx
22K

Patricia Amateis <pamateis@vt.edu>
To: "Benjamin F. Tracy" <bfracy@vt.edu>

Sat, Nov 30, 2019 at 4:54 PM

Hi Benjamin,

Yes, I agree to include CHEM 1035, 1036, 1045, 1046, 2535, 2536, 2545, and 2546 to the appropriate checksheets.

Patricia Amateis
Director of Undergraduate Education
Chemistry Department
[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>
To: Patricia Amateis <pamateis@vt.edu>

Mon, Dec 2, 2019 at 12:04 PM

Great, thanks, Patricia!
[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new and revised major

3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Wed, Jan 15, 2020 at 10:59 AM

To: melaniefox@vt.edu

Hello Melanie - As part of our new proposed Plant Science degree, we are revising existing majors and creating 1 new major. We are and seeking approval to include courses from your Department. The courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the new and revised major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

Pathways (Reasoning in the Social Sciences)**ECON 2005: Principles of Econ Food Fiber (for all majors)**

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Benjamin F. Tracy, PhD
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Office Ph: 540.231.8259



Melanie Fox <melaniefox@vt.edu>

Mon, Jan 20, 2020 at 8:59 PM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Hi Benjamin,
Consider this approved! Let me know if you need more.

Melanie Fox, PhD
Undergraduate Director
melaniefox@vt.edu

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>

Tue, Jan 21, 2020 at 9:38 AM

To: Melanie Fox <melaniefox@vt.edu>

Thank you!

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new Plant Science degree

5 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: lauraf92@vt.edu

Fri, Oct 16, 2020 at 6:27 PM

Hello Laura - I am not sure if you are still the person to contact about this, but the School of Plant and Environmental Sciences is creating a new Plant Science degree with 4 majors. We are seeking approval to include several courses from your Department. The courses associated major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

Pathways (Discourse) required for all majors

___ ENGL 1105 (3) First Year Writing

___ ENGL 1106 (3) First Year Writing

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Benjamin F. Tracy, PhD
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Benjamin F. Tracy <bftracy@vt.edu>

Wed, Oct 21, 2020 at 3:31 PM

To: Laura Ferguson <lauraf92@vt.edu>

Hello Laura - sorry to bug you again, but I was hoping to get this major proposal submitted sometime this week. When you have a chance, please let me know whether your department would approve of us listing ENGL 1105/1106 on the new checksheets for majors associated with the proposed Plant Science degree. Or maybe let me know who I should contact about this?

Thanks!

[Quoted text hidden]

Ferguson, Laura <lauraf92@vt.edu>

Thu, Oct 22, 2020 at 2:55 AM

To: "Tracy, Benjamin F." <bfracy@vt.edu>

Get [Outlook for iOS](#)

From: Derek Mueller <dmueller@vt.edu>

Sent: Wednesday, October 21, 2020 4:52 PM

To: Mooney, Jennifer

Cc: Ferguson, Laura; Weaver-Hightower, Rebecca

Subject: Re: FW: Course approvals for new Plant Science degree

Hi everyone,

Yes, it is entirely appropriate from every angle I can see for Plant Sciences to include the first-year writing sequence in their programs of study/check-sheets.

All the best,

Derek

[Quoted text hidden]

--

Jennifer Mooney, Ph.D.

Assistant Chair, Department of English

Senior Instructor of English

Department of English (MC0112)

323 Shanks Hall

Virginia Tech

[181 Turner St. NW](#)

Blacksburg, VA 24061

--

Derek N. Mueller (he/him)

Associate Professor // Director of Composition

Department of English, Virginia Tech
+1-540-231-1738 // dmueller@vt.edu
<http://www.derekmueller.net/rc/>
[Schedule a conference](#)

Ferguson, Laura <lauraf92@vt.edu>

Thu, Oct 22, 2020 at 2:57 AM

To: "Tracy, Benjamin F." <bftracy@vt.edu>

No problem at all, I totally understand the need for timeliness! Our Director of Composition, Derek Mueller, has approved and I have forwarded his email to you. Please let me know if we can help with anything else!

Laura

Get [Outlook for iOS](#)

From: Benjamin F. Tracy <bftracy@vt.edu>

Sent: Wednesday, October 21, 2020 3:31:09 PM

To: Ferguson, Laura <lauraf92@vt.edu>

Subject: Re: Course approvals for new Plant Science degree

[Quoted text hidden]

Rebecca Weaver-Hightower <rebeccawh@vt.edu>

Thu, Oct 22, 2020 at 6:23 AM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Cc: "Mooney, Jennifer" <jenmoon@vt.edu>, "Ferguson, Laura" <lauraf92@vt.edu>

Prof. Tracy,

Your email was forwarded to me, and I approve the inclusion of 1105 and 1106 in your new degree. I wish you the best of luck with it!

On Wed, Oct 21, 2020 at 3:45 PM Ferguson, Laura <lauraf92@vt.edu> wrote:

Hi Rebecca,

I've copied Jen here too for a head's up on scheduling purposes! Typically the Chair has been the one to respond to these requests in the past. We've approved this for them before! I believe he's working on getting the proposal in this week if you could kindly email Benjamin back and copy me!

Many thanks,

Laura

Laura Ferguson

Advising Coordinator

Department of English

329C Shanks Hall

[181 Turner St NW](#)

Virginia Tech

Blacksburg, VA 24061

540.231.6515

liberalarts.vt.edu/english

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From: "Benjamin F. Tracy" <bftracy@vt.edu>

Date: Friday, October 16, 2020 at 6:26 PM

To: Laura Ferguson <lauraf92@vt.edu>

[Quoted text hidden]

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for revised majors

4 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Kring, Timothy" <timkring@vt.edu>

Wed, Jan 15, 2020 at 7:21 AM

Hello Tim - You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. The courses associated with the revised majors are listed below (please note inclusion of Pesticide Usage in these revised majors). If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben

Crop and Soil Science Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Landscape Design and Turfgrass Science Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Plant Science Major

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Environmental Horticulture Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

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Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
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185 Ag. Quad Lane (MC 0404)
Blacksburg, Va 24061
[Email:bftracy@vt.edu](mailto:bftracy@vt.edu)
Office Ph: 540.231.8259



Kring, Timothy <timkring@vt.edu>
To: "Tracy, Benjamin F." <bfrtracy@vt.edu>

Wed, Jan 15, 2020 at 7:38 AM

Good morning Ben.

Yes, I do remember, and I approve the inclusion of these courses in the revised majors.

Tim

Tim Kring, Head
Department of Entomology
(540) 231-6341
Pronouns: he/him/his



[Quoted text hidden]

Kring, Timothy <timkring@vt.edu>
To: "Tracy, Benjamin F." <bfrtracy@vt.edu>

Wed, Jan 15, 2020 at 7:40 AM

Good morning again, Ben.

As an aside, yesterday I spoke with the new instructor (Tim McCoy) of Pesticide Usage today, and he and Daniel Frank (director of VT Pesticides Program) will visit with you and Jen (and anyone else you suggest) to discuss course content of 4254. The cancellation this year is a good thing, in many ways, as the course will appear very different as always happens with new instructors.

FYI, the CHEM prerequisite (which currently shows CHEM 2515 or CHEM 2536) is in the process of being dropped. Actually, I think CHEM 2515 is a typo, should have been CHEM 2514, Survey of Organic Chem, but that's irrelevant as neither will be prerequisites.

Have a great day,

Tim

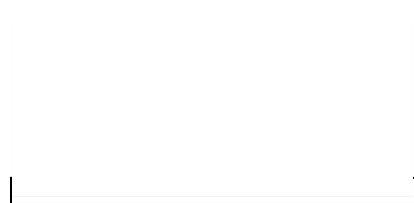
From: Benjamin F. Tracy <bftracy@vt.edu>
Sent: Wednesday, January 15, 2020 7:22 AM
To: Kring, Timothy <timkring@vt.edu>
Subject: Course approvals for revised majors

Hello Tim - You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. The courses associated with the revised majors are listed below (please note inclusion of Pesticide Usage in these revised majors). If you agree to these inclusions, an email response should suffice.

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>
To: "Kring, Timothy" <timkring@vt.edu>

Wed, Jan 15, 2020 at 8:10 AM

Great. Thanks Tim. Just let Jen and I know when you want to meet to discuss Pesticide Usage.

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new and revised majors

4 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Rogers, Robert" <rogers@vt.edu>

Wed, Jan 15, 2020 at 7:06 AM

Hello Bob: As part of our new proposed Plant Science degree, we are also revising existing majors and creating 1 new major. We are seeking approval to include several courses from your Department. These courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the new and revised major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,

Ben

Plant Science Major

Pathways Quantitative and Comp. Thinking
MATH 1025, 2016

Environmental Horticulture Major

Pathways Quantitative and Comp. Thinking
MATH 1014

Crop and Soil Sciences Major

Pathways Quantitative and Comp. Thinking
MATH 1014

Landscape Design and Turfgrass Science Major

Pathways Quantitative and Comp. Thinking
MATH 1014

--

Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
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Office Ph: 540.231.8259



COLLEGE OF AGRICULTURE AND LIFE SCIENCES
**SCHOOL OF PLANT AND
ENVIRONMENTAL SCIENCES**
VIRGINIA TECH™

Robert Rogers <rogers@vt.edu>
To: "Benjamin F. Tracy" <bftracy@vt.edu>

Wed, Jan 15, 2020 at 7:33 AM

Ben -

The Department of Mathematics supports your department's curriculum revisions. Since the MATH courses to be included on the new checksheets (listed below) are on the old checksheets, we expect to be able to teach these with no new resources.

Bob

1/15/2020

Virginia Tech Mail - Course approvals for new and revised majors

[Quoted text hidden]

--

Robert C. Rogers
Professor and Associate Chair
460 McBryde Hall
Department of Mathematics
Virginia Tech
Virginia Tech students can make appointments using Navigate.
Use Care Unit - Advising, Location - McBryde,
Service - Exploring Mathematics.

Robert Rogers <rogers@vt.edu>
To: "Benjamin F. Tracy" <bfracy@vt.edu>

Wed, Jan 15, 2020 at 7:34 AM

Ben -

If you want the previous email on letterhead, I'll be happy to oblige. The email is usually enough.

Bob

On 1/15/20 7:06 AM, Benjamin F. Tracy wrote:

[Quoted text hidden]

[Quoted text hidden]

Benjamin F. Tracy <bfracy@vt.edu>
To: Robert Rogers <rogers@vt.edu>

Wed, Jan 15, 2020 at 7:39 AM

This should be fine - thanks Bob

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new Plant Science degree

3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Fri, Oct 16, 2020 at 6:25 PM

To: Anne Driscoll <agryan@vt.edu>

Hello Anne - I am not sure if you are still the person to contact about this, but the School of Plant and Environmental Sciences is creating a new Plant Science degree with 4 majors. We are seeking approval to include STAT 3615 Biological Statistics as a Pathways requirement for our new Plant Science major (proposed checksheet attached). We probably will not have many students in this major to start (maybe 10-15) so I don't think it will impact enrollment much. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

--

Benjamin F. Tracy, PhD

Associate Director of Undergraduate Programs

School of Plant and Environmental Sciences - Virginia Tech

185 Ag. Quad Lane (MC 0404)

Blacksburg, Va 24061

Email: bftracy@vt.edu

Office Ph: 540.231.8259



PLSC Checksheet 10.16.20.docx
28K

Benjamin F. Tracy <bftracy@vt.edu>
To: Anne Driscoll <agryan@vt.edu>

Wed, Oct 21, 2020 at 3:27 PM

Hi Anne - Sorry to bug you again, but I was hoping to get this major proposal submitted sometime this week. When you have a chance, please let me know whether your department would approve of us listing STAT 3615 the new checksheet for the Plant Science major.

Thanks!

[Quoted text hidden]

Anne Driscoll <agryan@vt.edu>
To: "Benjamin F. Tracy" <bftracy@vt.edu>

Wed, Oct 21, 2020 at 10:50 PM

Hi Ben,

I spoke with our department head, Dave Higdon, and we approve your request to Stat 3615 to your checksheet. Please let us know if you need anything else.

Best,
Anne

On Oct 21, 2020, at 3:28 PM, Benjamin F. Tracy <bftracy@vt.edu> wrote:

[Quoted text hidden]



COLLEGE OF AGRICULTURE AND LIFE SCIENCES
SCHOOL OF PLANT AND
ENVIRONMENTAL SCIENCES
VIRGINIA TECH.

School of Plant and
Environmental Sciences
185 Ag. Quad Lane
Smyth Hall (0404)
Blacksburg, Virginia 24061
bftracy@vt.edu

To: CALS Curriculum Committee

From: Benjamin Tracy, Associate Director for Undergraduate Programs- School of Plant and Environmental Sciences (SPES)

Date: 16 October 2020

Re: Crop and Soil Sciences (CSSC) major

The School of Plant and Environmental Sciences (SPES) seeks to merge two-degree programs and create a new Bachelor of Science (B.S.) in Plant Science. The two programs to be merged include the B.S. in Crop and Soil Environmental Sciences and the B.S. in Horticulture. The merged degree program in Plant Science will offer four majors: 1) Crop and Soil Sciences (CSSC), 2) Landscape Design and Turfgrass Science (LTS), 3) Plant Science (PLSC), and 4) Environmental Horticulture (EVHT). The School of Plant and Environmental Sciences supports the new Crop and Soil Sciences major to be housed under the new Plant Sciences degree.

Sincerely,

Benjamin F Tracy, PhD
Associate Director of Undergraduate Programs

To: CALS Undergraduate Curriculum Committee, Commission on Undergraduate Studies and Policies, University Council, University Curriculum Committee

From: Benjamin Tracy, Associate Director Undergraduate Programs, School of Plant and Environmental Sciences.

Date: 10.16.20

The School of Plant and Environmental Sciences (SPES) proposes to create a new major Crop and Soil Sciences (CSSC) under the Plant Science degree.

Justification:

The School of Plant and Environmental Sciences (SPES) was formed in July 2018 by merging three departments: Crop and Soil Environmental Science (CSES), Horticulture (HORT), and Plant Pathology, Physiology, and Weed Science (PPWS). This merger prompted the newly integrated faculty to convene and discuss options for the undergraduate programs, which consisted of three B.S. degrees spanning the three former departments. From these discussions, it was determined that the merger of two degrees, the B.S. in Crop and Soil Environmental Sciences and the B.S. in Horticulture, into one B.S. in Plant Science degree would best serve the students by providing a unified, integrated curriculum with a wider breadth of subject material and expertise that would make graduates of the program more competitive for jobs in the public and private sector. The proposed degree program will offer four majors: 1) Crop and Soil Sciences, 2) Landscape Design and Turfgrass Science, 3) Plant Science, and 4) Environmental Horticulture. Each major will provide a discrete and specialized knowledge of a disciplinary or interdisciplinary area that will prepare graduates for employment in that field.

The Crop and Soil Sciences (CSSC) major will retain much of its former curriculum. The main change is addition of a new degree core (25 cr.) required for the Plant Science degree. Another major change is the discontinuance of the four options: Agronomy, Turfgrass Management, Crop Breeding and Genetics, and International Agriculture. Except for a few changes, the curriculum of the revised CSSC major will be similar to the former Agronomy option.

Administration and Teach Out Plan:

First enrollment in the new majors is anticipated for Fall 2021 with first graduation Spring 2025. Students currently in the CSSC major will be allowed to complete their existing programs by Spring 2025. SPES will communicate with students to ensure they comply with this timeline.

**College of Agriculture and Life Sciences
School of Plant and Environmental Sciences
Bachelor of Science in Plant Science
Major in Crop and Soil Sciences
For students entering under UG catalog 2021-2022**

Pathways to General Education (44-47 credits)

Concept 1 – Discourse (9 credit hours)

1F – Foundational

- ____ (3) ENGL 1105 First-Year Writing (3 credits) – F, S
- ____ (3) ENGL 1106 First-Year Writing (3 credits) – F, S, SI, SII

1A – Advanced/Applied

- ____ (3) – F, S, W, SI, SII

Concept 2 – Critical Thinking in the Humanities (6 credits)

- ____ (3) – F, S, W, SI, SII
- ____ (3) – F, S, W, SI, SII

Concept 3 – Reasoning in the Social Sciences (6 credits)

- ____ (3) AAEC 1005 Econ Food Fiber Sys or ECON 2005 Principles of Economics – F, S
- ____ (3) – F, S, W, SI, SII

Concept 4 – Reasoning in the Natural Sciences (6 credits)

- ____ (3) CHEM 1035: General Chemistry* – F, S, SI, SII
- ____ (3) CHEM 1036: General Chemistry* – F, S, SI, SII

Concept 5 – Quantitative and Computational Thinking (11 credits)

5f – Foundational (8 credits)

- ____ (3) MATH 1014: Precalc with Transcendental – F, S, SI, SII
- ____ (3) – F, S, SI, SII

5a – Advanced/Applied (3 credits)

- ____ (3) – F, S

Concept 6 – Critique and Practice in Design and the Arts (6 credits)

6d – Design

- ____ (3) – F, S, W, SI, SII

6a – Arts

- ____ (3) – F, S, W, SI, SII

Concept 7 – Critical Analysis of Identity and Equity in the United States

(3 credits) (may be double-counted with another Pathways concept)

- ____ (3) – F, S, W, SI, SII

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.
Key:

F – Fall
S – Spring
W – Winter
SI – Summer, Part I
SII – Summer, Part II

Plant Science Degree Core Requirements (25 credits)

- ____ (1) ALS 1234: CALS First Year Seminar – F
- ____ (3) ALCE 3634: Comm Ag & Life Sci in Speaking – F, S
or ALCE 3624: Comm Agriculture in Writing – F, S
- ____ (3) BIOL 1105: Principles of Biology – F, W, SI
- ____ (3) BIOL 1106: Principles of Biology – F, W, SI
- ____ (3) ENSC 1015: Found Environmental Sci – F
- ____ (3) HORT/BIOL 2304: Plant Biology* – F, S
- ____ (3) PPWS 2104: Plants, Genes, and People* - F
- ____ (4) PPWS 4104: Plant Pathology – F
- ____ (2) SPES 4864: Plant Science Capstone* - TBD

Crop and Soil Sciences Major Requirements (21 credits)

- ____ (3) AAEC 2434: Foundations of Agribusiness* – F,S
- ____ (1) CHEM 1045: General Chemistry Lab* -F
- ____ (1) CHEM 1046: General Chemistry Lab* - S
- ____ (3) CSES 2444 Agronomic Crops – F
- ____ (3) CSES 3114/ENSC 3114/GEOS 3614: Soils* – F
- ____ (1) CSES 3124/ENSC 3124/GEOS 3624: Soils Laboratory* – F
- ____ (3) CSES 4144: Plant Breeding & Genetics – S
- ____ (3) CSES 4214: Soil Fertility and Management* – F
- ____ (3) ENT 4254: Insect Pest Management* – S

Restricted Electives (minimum 18 credits or approved Minor)

- ____ (3) AAEC 2104: Personal Financial Planning – F,S
- ____ (3) AAEC 3004: Ag Prod & Cons Econ* – F,S
- ____ (3) AAEC 3314: Environmental Law - S
- ____ (3) AAEC 3504: Marketing Ag Products* – F
- ____ (3) AAEC 3604: Agricultural Law – F
- ____ (3) ALS 3404: Ecological Agriculture – F

**College of Agriculture and Life Sciences
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Bachelor of Science in Plant Science
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- ___ (3) BIOL 2804: Ecology* – F, S, SII
- ___ (3) CHEM 2535: Organic Chemistry* – F, S, SI
- ___ (3) CHEM 2536: Organic Chemistry* – F, S
- ___ (1) CHEM 2545: Organic Chemistry Laboratory* – F, S
- ___ (1) CHEM 2546: Organic Chemistry Laboratory* – S, SI
- ___ (3) CSES 2244: Ag Global Food Sec and Health - F
- ___ (3) CSES 2434: Crop Evaluation - S
- ___ (3) CSES 2564: Turfgrass Management* - F
- ___ (3) CSES 3144: Soil Description & Interp* – F
- ___ (3) CSES/HORT 3444: World Crops & Systems – S
- ___ (3) CSES/ENSC 3614: Soil Phys & Hydro Properties* – S
- ___ (3) CSES/ENSC 3644: Plant for Env Rest* – S
- ___ (3) CSES/ENSC 4134: Soil Genesis & Class* - S
- ___ (3) CSES/FREC 4334: Agroforestry – F
- ___ (3) CSES 4344: Crop Physiology and Ecology - S
- ___ (3) CSES 4354: Advanced Agronomic Crops – S
- ___ (3) CSES/ENSC 4774: Reclamation Disturb. Lands* - F
- ___ (3) CSES/ENSC 4854: Wetland Soils and Mitigation* - F
- ___ (3) CSES/ENSC/CHEM 4734: Environmental Soil Chemistry* –S
- ___ (3) ENT 2004: Insects and Human Society – F, S
- ___ (3) ENT/PPWS 4264: Pesticide Usage* – S
- ___ (3) HORT 2234: Envir Factors in Hort – S
- ___ (3) HORT 2184: Plants, Places, Culture Globally – S
- ___ (3) HORT 2234: Envir Factors in Hort - S
- ___ (3) HORT 4064: Soil Microbiology* - F
- ___ (3) PPWS 2754: Weeds that Shape our World - F
- ___ (3) PPWS 4154: Plant Problem Diagnosis* – F
- ___ (3) PPWS 4604: Biological Invasions* – F

Free Electives (to reach 120 Total Credit Hours)

___ () _____

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.
Key:

F – Fall
S – Spring
W – Winter
SI – Summer, Part I
SII – Summer, Part II

Approved Minors

Agribusiness Management and Entrepreneurship
Agricultural and Applied Economics
Animal and Poultry Sciences
Civic Agriculture and Food Systems
Dairy Science
Ecosystems for Human Well Being
Entomology
Environmental Economics
Environmental Science
Equine Science
Food Science & Technology
Global Food Security and Health
Horticulture
Integrative Health and Wellness
International Agricultural and Life Sciences
International Trade & Development
Leadership & Social Change
Plant Health Sciences
Turfgrass Management
Viticulture
Wetland Science

Note:

Total Hours Required: 120

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor

**College of Agriculture and Life Sciences
School of Plant and Environmental Sciences
Bachelor of Science in Plant Science
Major in Crop and Soil Sciences
For students entering under UG catalog 2021-2022**

Satisfactory Progress:

By the end of the academic year in which the student has attempted 60 credits (including transfer, advanced placement, advanced standing and credit by examination), "satisfactory progress" toward a BS PLSC degree will include:

Passing the following:

- At least 24 credits that apply to the Pathways to General Education
- CHEM 1035 and 1036
- ALS 1234, CSES/ENSC 3114 and CSES/ENSC 3124
- 6 credits of Math

GPA Requirements:

- Overall GPA: 2.0 (each semester in order to be in good academic standing)
- In-major GPA: 2.0 (by the time the student graduates)
 - Includes classes in: CSES, HORT, and PPWS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.
Key:

F – Fall
S – Spring
W – Winter
SI – Summer, Part I
SII – Summer, Part II



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for revised majors

3 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Ellerbrock, Mike" <mebroek@vt.edu>

Wed, Jan 15, 2020 at 7:20 AM

Hello Mike- You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. Many of these courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the revised majors are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben

Pathways Reasoning in the Social Sciences

AAEC: 1105 Econ Food Fiber (all majors)

Crop and Soil Science Major

Core Courses

AAEC 2434: Foundations of Agribusiness

Restricted Electives

AAEC/FIN 2104: Personal Financial Planning

AAEC 3004: Agricultural Production and Consumption Economics

AAEC 3314: Environmental Law

AAEC 3504: Marketing Agricultural Products

AAEC 3604: Agricultural Law

Landscape Design and Turfgrass Science Major

Core Courses

AAEC 2434: Foundations of Agribusiness

Environmental Horticulture Major

Core Courses

AAEC 2434: Foundations of Agribusiness

AAEC/MGT 3454: Small Business Management & Entrepreneurship

--

Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
School of Plant and Environmental Sciences - Virginia Tech
185 Ag. Quad Lane (MC 0404)
Blacksburg, Va 24061
[Email:bftracy@vt.edu](mailto:bftracy@vt.edu)
Office Ph: 540.231.8259



Ellerbrock, Mike <mebroock@vt.edu>

Wed, Jan 15, 2020 at 10:07 AM

To: "Tracy, Benjamin F." <bftracy@vt.edu>

Cc: "Holt, Matthew" <mattholt@vt.edu>, "White, Katie" <katiwhite@vt.edu>, "Norton, George" <gnorton@vt.edu>, "Stephenson, Kurt" <kurts@vt.edu>, "Isengildina Massa, Olga" <oimassa@vt.edu>, "Stewart, Shamar" <stewartls@vt.edu>

Hi Ben,

Yes – we always welcome your students in these AAEC courses.

Nice doing business with you!

Mike

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>

Wed, Jan 15, 2020 at 12:46 PM

To: "Ellerbrock, Mike" <mebroock@vt.edu>

Many thanks again, Mike!

[Quoted text hidden]



Benjamin F. Tracy <bfracy@vt.edu>

ALCE courses in new Plant Science degree

Friedel, Curtis <cfriedel@vt.edu>

Mon, Dec 2, 2019 at 12:39 PM

To: "Tracy, Benjamin F." <bfracy@vt.edu>

Hi Ben,

Sorry for my delay in getting back to you. Yes, we approve of including ALCE 3624 Comm. in Ag. Writing OR ALCE 3634 Comm. in Ag. Life Sci Speaking, in the core of the new merged degree program in Plant Science. Based on this enrollment projection estimate, we would not need any additional resources.

I would also add, for future planning, we are in process of having both courses approved for the Pathways general education curriculum in Discourse (1a).

Respectfully,

-Curt

Curtis R. Friedel, Ph.D.

Associate Professor | Undergraduate Program Director

Department of Agricultural, Leadership, & Community Education (0343)

Virginia Tech | 214-C Litton-Reaves Hall

[175 West Campus Drive, Blacksburg, VA 24061](#)

[Ph: \(540\) 231-8177](tel:5402318177) | email: cfriedel@vt.edu

<http://www.alce.vt.edu/student-info/undergraduate.html>

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

BHCM courses in new Plant Science Degree

3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Mon, Nov 25, 2019 at 3:28 PM

To: zhujin@vt.edu

Dear Dr. Zhu - I am currently Undergraduate Program Director in the School of Plant and Environmental Sciences. We are in the process of creating a merged degree in Plant Science that will contain 1 new, and 3 revised majors (current curriculum structure attached). We are requesting permission to include the courses below on our new checksheets. If you agree to this, a response via email would be fine.

Of course, if there are any questions or concerns please let me know.

Courses:

BCHM 3114 Biochem for Biotech (required for Plant Science major - projected enrollment increase ~ 5-10 students/yr)


BCHM 2114 - Biochemical Calculations (Restricted elective - projected enrollment increase - 2-3 students/yr.)

BCHM 4054 - Genomics (Restricted elective - projected enrollment increase - 2-3 students/yr.)

Regards,
Ben Tracy

Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
School of Plant and Environmental Sciences - Virginia Tech
185 Ag. Quad Lane (MC 0404)
Blacksburg, Va 24061
[Email:bftracy@vt.edu](mailto:bftracy@vt.edu)
Office Ph: 540.231.8259



 Proposed Plant Science curriculum 11.25.19.xlsx
22K

zhujin@vt.edu <zhujin@vt.edu>

Wed, Nov 27, 2019 at 9:25 AM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Hi Ben,

You have our permission to include the courses on your checksheets.

Happy Thanksgiving.

Jinsong

Jinsong Zhu

Professor

Department of Biochemistry

Virginia Tech

Blacksburg, VA 24061

540-231-3841

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>
To: zhujin@vt.edu

Wed, Nov 27, 2019 at 9:45 AM

Thank you, you too!

[Quoted text hidden]

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[Quoted text hidden]

To: Benjamin Tracy, Associate Director Undergraduate Programs, School of Plant and Environmental Sciences

From: Richard Walker, Associate Department Head, Biological Sciences

Re: Inclusion of BIOL courses on SPES checksheets

Date: November 30, 2019

The Department of Biological Sciences supports inclusion of the following BIOL courses as requested by the School of Plant and Environmental Sciences. Please note seat availability in these courses is dependent on continued funding support from the College of Science and the university.

Plant Science Degree Core

BIOL 1105 Principles of Biology

Plant Science Major requirement

BIOL 1106 Principles of Biology

Crop and Soil Science Major Restricted Electives

BIOL 1106 Principles of Biology

BIOL 2804 Ecology

Plant Science Major Restricted Electives

BIOL 2004 Genetics

BIOL 2134 Cell Function and Differentiation

BIOL 4134 Evolutionary Genetics

BIOL 4334 Chemical Ecology



Benjamin F. Tracy <bfracy@vt.edu>

CHEM courses in new Plant Science degree3 messages

Benjamin F. Tracy <bfracy@vt.edu>
To: Patricia Amateis <pamateis@vt.edu>

Mon, Nov 25, 2019 at 4:35 PM

Dear Patricia - I am currently Undergraduate Program Director in the School of Plant and Environmental Sciences. We are in the process of creating a merged degree in Plant Science that will contain 1 new, and 3 revised majors (current curriculum structure attached). We are requesting permission to include the courses below on our new checksheets. If you agree to this, a response via email would be fine.

Of course, if there are any questions or concerns please let me know.

Thanks!
Ben

Courses:
Pathways:
CHEM 1035, 1036 General Chemistry (required for 2 majors - projected enrollment increase 5-10 students/yr.)


Major Requirements:
CHEM 1045, 1046 General Chemistry Lab (required for 2 majors - projected enrollment increase 5-10 students/yr.)

CHEM 2535, 2536 Organic Chemistry (required for 1 major - projected enrollment increase 5-10 students/yr.)
CHEM 2545, 2546 Organic Chemistry Lab (required for 1 major - projected enrollment increase 5-10 students/yr.)

--

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 Proposed Plant Science curriculum 11.25.19.xlsx
22K

Patricia Amateis <pamateis@vt.edu>
To: "Benjamin F. Tracy" <bfracy@vt.edu>

Sat, Nov 30, 2019 at 4:54 PM

Hi Benjamin,

Yes, I agree to include CHEM 1035, 1036, 1045, 1046, 2535, 2536, 2545, and 2546 to the appropriate checksheets.

Patricia Amateis
Director of Undergraduate Education
Chemistry Department
[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>
To: Patricia Amateis <pamateis@vt.edu>

Mon, Dec 2, 2019 at 12:04 PM

Great, thanks, Patricia!
[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new and revised major

3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Wed, Jan 15, 2020 at 10:59 AM

To: melaniefox@vt.edu

Hello Melanie - As part of our new proposed Plant Science degree, we are revising existing majors and creating 1 new major. We are and seeking approval to include courses from your Department. The courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the new and revised major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

Pathways (Reasoning in the Social Sciences)**ECON 2005: Principles of Econ Food Fiber (for all majors)**

--

Benjamin F. Tracy, PhD
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[Email:bftracy@vt.edu](mailto:bftracy@vt.edu)
Office Ph: 540.231.8259



Melanie Fox <melaniefox@vt.edu>

Mon, Jan 20, 2020 at 8:59 PM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Hi Benjamin,
Consider this approved! Let me know if you need more.

Melanie Fox, PhD
Undergraduate Director
melaniefox@vt.edu

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>

Tue, Jan 21, 2020 at 9:38 AM

To: Melanie Fox <melaniefox@vt.edu>

Thank you!

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new Plant Science degree

5 messages

Benjamin F. Tracy <bftracy@vt.edu>

Fri, Oct 16, 2020 at 6:27 PM

To: lauraf92@vt.edu

Hello Laura - I am not sure if you are still the person to contact about this, but the School of Plant and Environmental Sciences is creating a new Plant Science degree with 4 majors. We are seeking approval to include several courses from your Department. The courses associated major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

Pathways (Discourse) required for all majors

___ ENGL 1105 (3) First Year Writing

___ ENGL 1106 (3) First Year Writing

--

Benjamin F. Tracy, PhD

Associate Director of Undergraduate Programs

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Blacksburg, Va 24061

Email: bftracy@vt.edu

Office Ph: 540.231.8259



Benjamin F. Tracy <bftracy@vt.edu>

Wed, Oct 21, 2020 at 3:31 PM

To: Laura Ferguson <lauraf92@vt.edu>

Hello Laura - sorry to bug you again, but I was hoping to get this major proposal submitted sometime this week. When you have a chance, please let me know whether your department would approve of us listing ENGL 1105/1106 on the new checksheets for majors associated with the proposed Plant Science degree. Or maybe let me know who I should contact about this?

Thanks!

[Quoted text hidden]

Ferguson, Laura <lauraf92@vt.edu>

Thu, Oct 22, 2020 at 2:55 AM

To: "Tracy, Benjamin F." <bfracy@vt.edu>

Get [Outlook for iOS](#)

From: Derek Mueller <dmueller@vt.edu>

Sent: Wednesday, October 21, 2020 4:52 PM

To: Mooney, Jennifer

Cc: Ferguson, Laura; Weaver-Hightower, Rebecca

Subject: Re: FW: Course approvals for new Plant Science degree

Hi everyone,

Yes, it is entirely appropriate from every angle I can see for Plant Sciences to include the first-year writing sequence in their programs of study/check-sheets.

All the best,

Derek

[Quoted text hidden]

--

Jennifer Mooney, Ph.D.

Assistant Chair, Department of English

Senior Instructor of English

Department of English (MC0112)

323 Shanks Hall

Virginia Tech

[181 Turner St. NW](#)

Blacksburg, VA 24061

--

Derek N. Mueller (he/him)

Associate Professor // Director of Composition

Department of English, Virginia Tech
+1-540-231-1738 // dmueller@vt.edu
<http://www.derekmueller.net/rc/>
[Schedule a conference](#)

Ferguson, Laura <lauraf92@vt.edu>

Thu, Oct 22, 2020 at 2:57 AM

To: "Tracy, Benjamin F." <bftracy@vt.edu>

No problem at all, I totally understand the need for timeliness! Our Director of Composition, Derek Mueller, has approved and I have forwarded his email to you. Please let me know if we can help with anything else!

Laura

Get [Outlook for iOS](#)

From: Benjamin F. Tracy <bftracy@vt.edu>

Sent: Wednesday, October 21, 2020 3:31:09 PM

To: Ferguson, Laura <lauraf92@vt.edu>

Subject: Re: Course approvals for new Plant Science degree

[Quoted text hidden]

Rebecca Weaver-Hightower <rebeccawh@vt.edu>

Thu, Oct 22, 2020 at 6:23 AM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Cc: "Mooney, Jennifer" <jenmoon@vt.edu>, "Ferguson, Laura" <lauraf92@vt.edu>

Prof. Tracy,

Your email was forwarded to me, and I approve the inclusion of 1105 and 1106 in your new degree. I wish you the best of luck with it!

On Wed, Oct 21, 2020 at 3:45 PM Ferguson, Laura <lauraf92@vt.edu> wrote:

Hi Rebecca,

I've copied Jen here too for a head's up on scheduling purposes! Typically the Chair has been the one to respond to these requests in the past. We've approved this for them before! I believe he's working on getting the proposal in this week if you could kindly email Benjamin back and copy me!

Many thanks,

Laura

Laura Ferguson

Advising Coordinator

Department of English

329C Shanks Hall

[181 Turner St NW](#)

Virginia Tech

Blacksburg, VA 24061

540.231.6515

liberalarts.vt.edu/english

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From: "Benjamin F. Tracy" <bftracy@vt.edu>

Date: Friday, October 16, 2020 at 6:26 PM

To: Laura Ferguson <lauraf92@vt.edu>

[Quoted text hidden]

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for revised majors

4 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Kring, Timothy" <timkring@vt.edu>

Wed, Jan 15, 2020 at 7:21 AM

Hello Tim - You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. The courses associated with the revised majors are listed below (please note inclusion of Pesticide Usage in these revised majors). If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben

Crop and Soil Science Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Landscape Design and Turfgrass Science Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Plant Science Major

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Environmental Horticulture Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

--

Benjamin F. Tracy, PhD
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Office Ph: 540.231.8259



Kring, Timothy <timkring@vt.edu>
To: "Tracy, Benjamin F." <bfrtracy@vt.edu>

Wed, Jan 15, 2020 at 7:38 AM

Good morning Ben.

Yes, I do remember, and I approve the inclusion of these courses in the revised majors.

Tim

Tim Kring, Head
Department of Entomology
(540) 231-6341
Pronouns: he/him/his



[Quoted text hidden]

Kring, Timothy <timkring@vt.edu>
To: "Tracy, Benjamin F." <bfrtracy@vt.edu>

Wed, Jan 15, 2020 at 7:40 AM

Good morning again, Ben.

As an aside, yesterday I spoke with the new instructor (Tim McCoy) of Pesticide Usage today, and he and Daniel Frank (director of VT Pesticides Program) will visit with you and Jen (and anyone else you suggest) to discuss course content of 4254. The cancellation this year is a good thing, in many ways, as the course will appear very different as always happens with new instructors.

FYI, the CHEM prerequisite (which currently shows CHEM 2515 or CHEM 2536) is in the process of being dropped. Actually, I think CHEM 2515 is a typo, should have been CHEM 2514, Survey of Organic Chem, but that's irrelevant as neither will be prerequisites.

Have a great day,

Tim

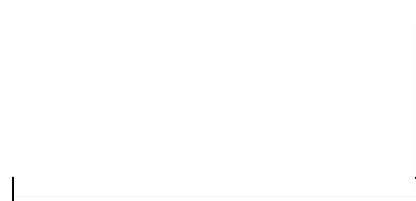
From: Benjamin F. Tracy <bftracy@vt.edu>
Sent: Wednesday, January 15, 2020 7:22 AM
To: Kring, Timothy <timkring@vt.edu>
Subject: Course approvals for revised majors

Hello Tim - You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. The courses associated with the revised majors are listed below (please note inclusion of Pesticide Usage in these revised majors). If you agree to these inclusions, an email response should suffice.

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>
To: "Kring, Timothy" <timkring@vt.edu>

Wed, Jan 15, 2020 at 8:10 AM

Great. Thanks Tim. Just let Jen and I know when you want to meet to discuss Pesticide Usage.

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new and revised majors

4 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Rogers, Robert" <rogers@vt.edu>

Wed, Jan 15, 2020 at 7:06 AM

Hello Bob: As part of our new proposed Plant Science degree, we are also revising existing majors and creating 1 new major. We are seeking approval to include several courses from your Department. These courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the new and revised major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben

Plant Science Major

Pathways Quantitative and Comp. Thinking
MATH 1025, 2016

Environmental Horticulture Major

Pathways Quantitative and Comp. Thinking
MATH 1014

Crop and Soil Sciences Major

Pathways Quantitative and Comp. Thinking
MATH 1014

Landscape Design and Turfgrass Science Major

Pathways Quantitative and Comp. Thinking
MATH 1014

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Benjamin F. Tracy, PhD
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COLLEGE OF AGRICULTURE AND LIFE SCIENCES
**SCHOOL OF PLANT AND
ENVIRONMENTAL SCIENCES**
VIRGINIA TECH™

Robert Rogers <rogers@vt.edu>
To: "Benjamin F. Tracy" <bftracy@vt.edu>

Wed, Jan 15, 2020 at 7:33 AM

Ben -

The Department of Mathematics supports your department's curriculum revisions. Since the MATH courses to be included on the new checksheets (listed below) are on the old checksheets, we expect to be able to teach these with no new resources.

Bob

1/15/2020

Virginia Tech Mail - Course approvals for new and revised majors

[Quoted text hidden]

--

Robert C. Rogers
Professor and Associate Chair
460 McBryde Hall
Department of Mathematics
Virginia Tech
Virginia Tech students can make appointments using Navigate.
Use Care Unit - Advising, Location - McBryde,
Service - Exploring Mathematics.

Robert Rogers <rogers@vt.edu>
To: "Benjamin F. Tracy" <bfracy@vt.edu>

Wed, Jan 15, 2020 at 7:34 AM

Ben -

If you want the previous email on letterhead, I'll be happy to oblige. The email is usually enough.

Bob

On 1/15/20 7:06 AM, Benjamin F. Tracy wrote:

[Quoted text hidden]

[Quoted text hidden]

Benjamin F. Tracy <bfracy@vt.edu>
To: Robert Rogers <rogers@vt.edu>

Wed, Jan 15, 2020 at 7:39 AM

This should be fine - thanks Bob

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new Plant Science degree

3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Fri, Oct 16, 2020 at 6:25 PM

To: Anne Driscoll <agryan@vt.edu>

Hello Anne - I am not sure if you are still the person to contact about this, but the School of Plant and Environmental Sciences is creating a new Plant Science degree with 4 majors. We are seeking approval to include STAT 3615 Biological Statistics as a Pathways requirement for our new Plant Science major (proposed checksheet attached). We probably will not have many students in this major to start (maybe 10-15) so I don't think it will impact enrollment much. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

--

Benjamin F. Tracy, PhD

Associate Director of Undergraduate Programs

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Blacksburg, Va 24061

Email: bftracy@vt.edu

Office Ph: 540.231.8259



PLSC Checksheet 10.16.20.docx
28K

Benjamin F. Tracy <bftracy@vt.edu>
To: Anne Driscoll <agryan@vt.edu>

Wed, Oct 21, 2020 at 3:27 PM

Hi Anne - Sorry to bug you again, but I was hoping to get this major proposal submitted sometime this week. When you have a chance, please let me know whether your department would approve of us listing STAT 3615 the new checksheet for the Plant Science major.

Thanks!

[Quoted text hidden]

Anne Driscoll <agryan@vt.edu>
To: "Benjamin F. Tracy" <bftracy@vt.edu>

Wed, Oct 21, 2020 at 10:50 PM

Hi Ben,

I spoke with our department head, Dave Higdon, and we approve your request to Stat 3615 to your checksheet. Please let us know if you need anything else.

Best,
Anne

On Oct 21, 2020, at 3:28 PM, Benjamin F. Tracy <bftracy@vt.edu> wrote:

[Quoted text hidden]



COLLEGE OF AGRICULTURE AND LIFE SCIENCES
SCHOOL OF PLANT AND
ENVIRONMENTAL SCIENCES
VIRGINIA TECH.

School of Plant and
Environmental Sciences
185 Ag. Quad Lane
Smyth Hall (0404)
Blacksburg, Virginia 24061
bftracy@vt.edu

To: CALS Curriculum Committee

From: Benjamin Tracy, Associate Director for Undergraduate Programs- School of Plant and Environmental Sciences (SPES)

Date: 10 October 2020

Re: Environmental Horticulture (EVHT) major

The School of Plant and Environmental Sciences (SPES) seeks to merge two-degree programs and create a new Bachelor of Science (B.S.) in Plant Science. The two programs to be merged include the B.S. in Crop and Soil Environmental Sciences and the B.S. in Horticulture. The merged degree program in Plant Science will offer four majors: 1) Crop and Soil Sciences (CSSC), 2) Landscape Design and Turfgrass Science (LTS), 3) Plant Science (PLSC), and 4) Environmental Horticulture (EVHT). The School of Plant and Environmental Sciences supports the new Environmental Horticulture major to be housed under the Plant Science degree.

Sincerely,

Benjamin F Tracy, PhD
Associate Director of Undergraduate Programs

To: CALS Undergraduate Curriculum Committee, Commission on Undergraduate Studies and Policies, University Council, University Curriculum Committee

From: Benjamin Tracy, Associate Director Undergraduate Programs, School of Plant and Environmental Sciences.

Date: 10.16.20

The School of Plant and Environmental Sciences (SPES) proposes to create a new major Environmental Horticulture (EVHT) under the new Plant Science degree.

Justification:

The School of Plant and Environmental Sciences (SPES) was formed in July 2018 by merging three departments: Crop and Soil Environmental Science (CSES), Horticulture (HORT), and Plant Pathology, Physiology, and Weed Science (PPWS). This merger prompted the newly integrated faculty to convene and discuss options for the undergraduate programs, which consisted of three B.S. degrees spanning the three former departments. From these discussions, it was determined that the merger of two degrees, the B.S. in Crop and Soil Environmental Sciences and the B.S. in Horticulture, into one B.S. in Plant Science degree would best serve the students by providing a unified, integrated curriculum with a wider breadth of subject material and expertise that would make graduates of the program more competitive for jobs in the public and private sector. The proposed degree program will offer four majors: 1) Crop and Soil Sciences, 2) Landscape Design and Turfgrass Science, 3) Plant Science, and 4) Environmental Horticulture. Each major will provide a discrete and specialized knowledge of a disciplinary or interdisciplinary area that will prepare graduates for employment in that field.

Environmental Horticulture major formerly existed under the Horticulture degree, and it will retain much of its former curriculum. The main change to the EVHT major is addition of a new degree core (25 cr.) required for the Plant Science degree. The major requirements for the new EVHT major were reduced from 31 to 23, and the three concentrations were replaced with one list of restricted elective courses. The SPES Curriculum Committee felt the concentrations mostly added complexity to the curriculum were deemed unnecessary.

Administration and Teach Out Plan:

First enrollment in the new majors is anticipated for Fall 2021 with first graduation Spring 2025. Students currently in the EHRT major will be allowed to complete their existing programs by Spring 2025. SPES will communicate with students to ensure they comply with this timeline.

College of Agriculture and Life Sciences
School of Plant and Environmental Sciences
Bachelor of Science in Plant Science
Major in Environmental Horticulture
For students entering under UG catalog 2021-2022

Pathways to General Education (44-47 credits)

Concept 1 – Discourse (9 credit hours)

1F – Foundational

- ____ (3) ENGL 1105 First-Year Writing (3 credits) – F, S
____ (3) ENGL 1106 First-Year Writing (3 credits) – F, S, SI, SII

1A – Advanced/Applied

- ____ (3) – F, S, W, SI, SII

Concept 2 – Critical Thinking in the Humanities (6 credits)

- ____ (3) – F, S, W, SI, SII
____ (3) – F, S, W, SI, SII

Concept 3 – Reasoning in the Social Sciences (6 credits)

- ____ (3) AAEC 1005 Econ Food Fiber Sys or ECON 2005 Principles of Economics – F, S
____ (3) – F, S, W, SI, SII

Concept 4 – Reasoning in the Natural Sciences (6 credits)

- ____ (3) CHEM 1035: General Chemistry* – F, S, SI, SII
____ (3) CHEM 1036: General Chemistry* – F, S, SI, SII

Concept 5 – Quantitative and Computational Thinking (11 credits)

5f – Foundational (8 credits)

- ____ (3) MATH 1014: Precalc with Transcendental – F, S, SI, SII
____ (3) – F, S, SI, SII

5a – Advanced/Applied (3 credits)

- ____ (3) – F, S

Concept 6 – Critique and Practice in Design and the Arts (6 credits)

6d – Design

- ____ (3) – F, S, W, SI, SII

6a – Arts

- ____ (3) – F, S, W, SI, SII

Concept 7 – Critical Analysis of Identity and Equity in the United States

(3 credits) (may be double-counted with another Pathways concept)

- ____ (3) – F, S, W, SI, SII

Plant Science Degree Core Requirements (25 credits)

- ____ (1) ALS 1234: CALS First Year Seminar – F
____ (3) ALCE 3634: Comm Ag & Life Sci in Speaking – F, S
or ALCE 3624: Comm Agriculture in Writing – F, S
____ (3) BIOL 1105: Principles of Biology – F, W, SI
____ (3) BIOL 1106: Principles of Biology – F, W, SI
____ (3) ENSC 1015: Found Environmental Sci – F
____ (3) HORT/BIOL 2304: Plant Biology* – F, S
____ (3) PPWS 2104: Plants, Genes, and People* – F
____ (4) PPWS 4104: Plant Pathology – F
____ (2) SPES 4864: Plant Science Capstone* – TBD

Environmental Horticulture Major Requirements (23 credits)

- ____ (2) HORT 2224: Horticulture Science & Industr – F
____ (3) HORT 2234: Envir Factors in Hort – S
____ (3) HORT 2244: Plant Propagation – S
____ (3) HORT 4324: Greenhouse Management – F
____ (3) HORT 3325: Woody Landscape Plants* – F or HORT 3326: Woody Landscape Plants* – S
____ (3) HORT 3324: Herbaceous Landscape Plants* – F
____ (3) CSES/ENSC 3134: Soils in the Landscape* – S
____ (3) ENT 4254: Insect Pest Management* – S

Business Requirement (6 credits)

- ____ (3) AAEC 2434: Foundations of Agribusiness* – F, S
____ (3) AAEC/MGT 3454: Small Bus Mgt & Entrepreneur* – S

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Key:

F – Fall
S – Spring
W – Winter
SI – Summer, Part I
SII – Summer, Part II

College of Agriculture and Life Sciences
School of Plant and Environmental Sciences
Bachelor of Science in Plant Science
Major in Environmental Horticulture
For students entering under UG catalog 2021-2022

Restricted Electives (Choose 12 credits from list below)

- ___(3) AAEC 2104 Personal Financial Planning - F, S
- ___(3) AAEC 3314: Environmental Law - S
- ___(3) AAEC 3004: Ag. Prod. Cons. Econ*- S
- ___(3) AAEC 3604: Agricultural Law – F
- ___(3) ALS 2204: Intro Civic Agriculture – F
- ___(3) ALS 3404: Ecological Agriculture – F
- ___(3) BIOL 2004: Genetics* – F, S
- ___(1) CHEM 1045: General Chemistry Laboratory* – F, S
- ___(1) CHEM 1046: General Chemistry Laboratory* - S, SI, SII
- ___(3) CHEM 2535: Organic Chemistry* – F, S, SI
- ___(3) CHEM 2536: Organic Chemistry* – F, S
- ___(1) CHEM 2545: Organic Chemistry Laboratory* – F, S
- ___(1) CHEM 2546: Organic Chemistry Laboratory* – S, SI
- ___(3) CSES 2444: Agronomic Crops – F
- ___(3) CSES 2564: Turfgrass Management* – F
- ___(3) CSES/HORT 3444: World Crops & Systems – S
- ___(3) CSES 4214: Soil Fertility and Management* – F
- ___(3) ENT 2004: Insects and Human Society – F, S
- ___(3) ENT/PPWS 4264: Pesticide Usage* – S
- ___(3) HORT 2144: Indoor Plants – F
- ___(3) HORT 2164: Floral Design- F,S
- ___(3) HORT/FREC 2134: Plants & Greenspaces Urban Com – F, W
- ___(3) HORT 2184: Plants Places Culture Globally – S
- ___(3) HORT 2834: Sustainable Ag Practicum – F, S
- ___(3) HORT/FST 3114: Wines and Vines* – S
- ___(3) HORT/FREC 3354: Trees in the Built Environment* – F
- ___(2) HORT 3664: Hardscape Materials & Instal* – F
- ___(2) HORT 4504: Landscape Contracting* – F
- ___(4) HORT 4545: Res Landscape Design* – F
- ___(4) HORT 4546: Res Landscape Design* – S
- ___(3) HORT 4614: Ornamental Plant Prod & Market

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Key:

F – Fall
S – Spring
W – Winter
SI – Summer, Part I
SII – Summer, Part II

- ___(3) HORT 4654: Viticulture* - S
- ___(3) HORT 4764: Vegetable Crops* – F, S
- ___(2) HORT 4784: Vegetable Seed Production* – S
- ___(3) HORT 4794: Medicinal Plants and Herbs* – F
- ___(3) HORT 4064: Soil Microbiology* - F
- ___(1) HORT 4205: Public Garden Maint & Mgt* – F
- ___(1) HORT 4206: Public Garden Maint & Mgt* – S

Free Electives (to reach 120 Total Credit Hours)

___() _____

Note:

Total Hours Required: 120

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor

Satisfactory Progress:

By the end of the academic year in which the student has attempted 60 credits (including transfer, advanced placement, advanced standing and credit by examination), "satisfactory progress" toward a BS PLSC degree will include:

1. At least 24 credits that apply to the Pathways of General Education
2. Passing the following courses:
MATH 1014, CHEM 1035 and 1036, HORT 2224 or 2234 or 2244, 6 additional HORT courses, 6 credits from CSES/ENSC 3134, ENT 4254, PPWS 4104

College of Agriculture and Life Sciences
School of Plant and Environmental Sciences
Bachelor of Science in Plant Science
Major in Environmental Horticulture
For students entering under UG catalog 2021-2022

GPA Requirements:

Overall GPA: 2.0 (each semester in order to be in good academic standing)

- In-major GPA: 2.0 (by the time the student graduates)
 - Includes classes in: CSES, ENT, HORT, and PPWS
- Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Key:

F – Fall
S – Spring
W – Winter
SI – Summer, Part I
SII – Summer, Part II



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for revised majors

3 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Ellerbrock, Mike" <mebrock@vt.edu>

Wed, Jan 15, 2020 at 7:20 AM

Hello Mike- You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. Many of these courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the revised majors are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben

Pathways Reasoning in the Social Sciences

AAEC: 1105 Econ Food Fiber (all majors)

Crop and Soil Science Major

Core Courses

AAEC 2434: Foundations of Agribusiness

Restricted Electives

AAEC/FIN 2104: Personal Financial Planning

AAEC 3004: Agricultural Production and Consumption Economics

AAEC 3314: Environmental Law

AAEC 3504: Marketing Agricultural Products

AAEC 3604: Agricultural Law

Landscape Design and Turfgrass Science Major

Core Courses

AAEC 2434: Foundations of Agribusiness

Environmental Horticulture Major

Core Courses

AAEC 2434: Foundations of Agribusiness

AAEC/MGT 3454: Small Business Management & Entrepreneurship

--

Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
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Office Ph: 540.231.8259



Ellerbrock, Mike <mebroock@vt.edu>

Wed, Jan 15, 2020 at 10:07 AM

To: "Tracy, Benjamin F." <bftracy@vt.edu>

Cc: "Holt, Matthew" <mattholt@vt.edu>, "White, Katie" <katiwhite@vt.edu>, "Norton, George" <gnorton@vt.edu>, "Stephenson, Kurt" <kurts@vt.edu>, "Isengildina Massa, Olga" <oimassa@vt.edu>, "Stewart, Shamar" <stewartls@vt.edu>

Hi Ben,

Yes – we always welcome your students in these AAEC courses.

Nice doing business with you!

Mike

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>

Wed, Jan 15, 2020 at 12:46 PM

To: "Ellerbrock, Mike" <mebroock@vt.edu>

Many thanks again, Mike!

[Quoted text hidden]



Benjamin F. Tracy <bfracy@vt.edu>

ALCE courses in new Plant Science degree

Friedel, Curtis <cfriedel@vt.edu>

Mon, Dec 2, 2019 at 12:39 PM

To: "Tracy, Benjamin F." <bfracy@vt.edu>

Hi Ben,

Sorry for my delay in getting back to you. Yes, we approve of including ALCE 3624 Comm. in Ag. Writing OR ALCE 3634 Comm. in Ag. Life Sci Speaking, in the core of the new merged degree program in Plant Science. Based on this enrollment projection estimate, we would not need any additional resources.

I would also add, for future planning, we are in process of having both courses approved for the Pathways general education curriculum in Discourse (1a).

Respectfully,

-Curt

Curtis R. Friedel, Ph.D.

Associate Professor | Undergraduate Program Director

Department of Agricultural, Leadership, & Community Education (0343)

Virginia Tech | 214-C Litton-Reaves Hall

[175 West Campus Drive, Blacksburg, VA 24061](#)

[Ph: \(540\) 231-8177](tel:5402318177) | email: cfriedel@vt.edu

<http://www.alce.vt.edu/student-info/undergraduate.html>

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

BHCM courses in new Plant Science Degree

3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Mon, Nov 25, 2019 at 3:28 PM

To: zhujin@vt.edu

Dear Dr. Zhu - I am currently Undergraduate Program Director in the School of Plant and Environmental Sciences. We are in the process of creating a merged degree in Plant Science that will contain 1 new, and 3 revised majors (current curriculum structure attached). We are requesting permission to include the courses below on our new checksheets. If you agree to this, a response via email would be fine.

Of course, if there are any questions or concerns please let me know.

Courses:

BCHM 3114 Biochem for Biotech (required for Plant Science major - projected enrollment increase ~ 5-10 students/yr)


BCHM 2114 - Biochemical Calculations (Restricted elective - projected enrollment increase - 2-3 students/yr.)

BCHM 4054 - Genomics (Restricted elective - projected enrollment increase - 2-3 students/yr.)

Regards,
Ben Tracy

Benjamin F. Tracy, PhD
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Office Ph: 540.231.8259



 Proposed Plant Science curriculum 11.25.19.xlsx
22K

zhujin@vt.edu <zhujin@vt.edu>

Wed, Nov 27, 2019 at 9:25 AM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Hi Ben,

You have our permission to include the courses on your checksheets.

Happy Thanksgiving.

Jinsong

Jinsong Zhu

Professor

Department of Biochemistry

Virginia Tech

Blacksburg, VA 24061

540-231-3841

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>
To: zhujin@vt.edu

Wed, Nov 27, 2019 at 9:45 AM

Thank you, you too!

[Quoted text hidden]

--

[Quoted text hidden]

To: Benjamin Tracy, Associate Director Undergraduate Programs, School of Plant and Environmental Sciences

From: Richard Walker, Associate Department Head, Biological Sciences

Re: Inclusion of BIOL courses on SPES checksheets

Date: November 30, 2019

The Department of Biological Sciences supports inclusion of the following BIOL courses as requested by the School of Plant and Environmental Sciences. Please note seat availability in these courses is dependent on continued funding support from the College of Science and the university.

Plant Science Degree Core

BIOL 1105 Principles of Biology

Plant Science Major requirement

BIOL 1106 Principles of Biology

Crop and Soil Science Major Restricted Electives

BIOL 1106 Principles of Biology

BIOL 2804 Ecology

Plant Science Major Restricted Electives

BIOL 2004 Genetics

BIOL 2134 Cell Function and Differentiation

BIOL 4134 Evolutionary Genetics

BIOL 4334 Chemical Ecology



Benjamin F. Tracy <bfracy@vt.edu>

CHEM courses in new Plant Science degree3 messages

Benjamin F. Tracy <bfracy@vt.edu>
To: Patricia Amateis <pamateis@vt.edu>

Mon, Nov 25, 2019 at 4:35 PM

Dear Patricia - I am currently Undergraduate Program Director in the School of Plant and Environmental Sciences. We are in the process of creating a merged degree in Plant Science that will contain 1 new, and 3 revised majors (current curriculum structure attached). We are requesting permission to include the courses below on our new checksheets. If you agree to this, a response via email would be fine.

Of course, if there are any questions or concerns please let me know.

Thanks!
Ben

Courses:
Pathways:
CHEM 1035, 1036 General Chemistry (required for 2 majors - projected enrollment increase 5-10 students/yr.)


Major Requirements:
CHEM 1045, 1046 General Chemistry Lab (required for 2 majors - projected enrollment increase 5-10 students/yr.)

CHEM 2535, 2536 Organic Chemistry (required for 1 major - projected enrollment increase 5-10 students/yr.)
CHEM 2545, 2546 Organic Chemistry Lab (required for 1 major - projected enrollment increase 5-10 students/yr.)

--

Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
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Blacksburg, Va 24061
[Email: bfracy@vt.edu](mailto:bfracy@vt.edu)
Office Ph: 540.231.8259



 Proposed Plant Science curriculum 11.25.19.xlsx
22K

Patricia Amateis <pamateis@vt.edu>
To: "Benjamin F. Tracy" <bfracy@vt.edu>

Sat, Nov 30, 2019 at 4:54 PM

Hi Benjamin,

Yes, I agree to include CHEM 1035, 1036, 1045, 1046, 2535, 2536, 2545, and 2546 to the appropriate checksheets.

Patricia Amateis
Director of Undergraduate Education
Chemistry Department
[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>
To: Patricia Amateis <pamateis@vt.edu>

Mon, Dec 2, 2019 at 12:04 PM

Great, thanks, Patricia!
[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new and revised major

3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Wed, Jan 15, 2020 at 10:59 AM

To: melaniefox@vt.edu

Hello Melanie - As part of our new proposed Plant Science degree, we are revising existing majors and creating 1 new major. We are and seeking approval to include courses from your Department. The courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the new and revised major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

Pathways (Reasoning in the Social Sciences)**ECON 2005: Principles of Econ Food Fiber (for all majors)**

--

Benjamin F. Tracy, PhD
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Blacksburg, Va 24061
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Office Ph: 540.231.8259



Melanie Fox <melaniefox@vt.edu>

Mon, Jan 20, 2020 at 8:59 PM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Hi Benjamin,
Consider this approved! Let me know if you need more.

Melanie Fox, PhD
Undergraduate Director
melaniefox@vt.edu

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>

Tue, Jan 21, 2020 at 9:38 AM

To: Melanie Fox <melaniefox@vt.edu>

Thank you!

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new Plant Science degree

5 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: lauraf92@vt.edu

Fri, Oct 16, 2020 at 6:27 PM

Hello Laura - I am not sure if you are still the person to contact about this, but the School of Plant and Environmental Sciences is creating a new Plant Science degree with 4 majors. We are seeking approval to include several courses from your Department. The courses associated major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

Pathways (Discourse) required for all majors

___ ENGL 1105 (3) First Year Writing

___ ENGL 1106 (3) First Year Writing

--

Benjamin F. Tracy, PhD
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Benjamin F. Tracy <bftracy@vt.edu>

Wed, Oct 21, 2020 at 3:31 PM

To: Laura Ferguson <lauraf92@vt.edu>

Hello Laura - sorry to bug you again, but I was hoping to get this major proposal submitted sometime this week. When you have a chance, please let me know whether your department would approve of us listing ENGL 1105/1106 on the new checksheets for majors associated with the proposed Plant Science degree. Or maybe let me know who I should contact about this?

Thanks!

[Quoted text hidden]

Ferguson, Laura <lauraf92@vt.edu>

Thu, Oct 22, 2020 at 2:55 AM

To: "Tracy, Benjamin F." <bfracy@vt.edu>

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From: Derek Mueller <dmueller@vt.edu>

Sent: Wednesday, October 21, 2020 4:52 PM

To: Mooney, Jennifer

Cc: Ferguson, Laura; Weaver-Hightower, Rebecca

Subject: Re: FW: Course approvals for new Plant Science degree

Hi everyone,

Yes, it is entirely appropriate from every angle I can see for Plant Sciences to include the first-year writing sequence in their programs of study/check-sheets.

All the best,

Derek

[Quoted text hidden]

--

Jennifer Mooney, Ph.D.

Assistant Chair, Department of English

Senior Instructor of English

Department of English (MC0112)

323 Shanks Hall

Virginia Tech

[181 Turner St. NW](#)

Blacksburg, VA 24061

--

Derek N. Mueller (he/him)

Associate Professor // Director of Composition

Department of English, Virginia Tech
+1-540-231-1738 // dmueller@vt.edu
<http://www.derekmueller.net/rc/>
[Schedule a conference](#)

Ferguson, Laura <lauraf92@vt.edu>

Thu, Oct 22, 2020 at 2:57 AM

To: "Tracy, Benjamin F." <bftracy@vt.edu>

No problem at all, I totally understand the need for timeliness! Our Director of Composition, Derek Mueller, has approved and I have forwarded his email to you. Please let me know if we can help with anything else!

Laura

Get [Outlook for iOS](#)

From: Benjamin F. Tracy <bftracy@vt.edu>

Sent: Wednesday, October 21, 2020 3:31:09 PM

To: Ferguson, Laura <lauraf92@vt.edu>

Subject: Re: Course approvals for new Plant Science degree

[Quoted text hidden]

Rebecca Weaver-Hightower <rebeccawh@vt.edu>

Thu, Oct 22, 2020 at 6:23 AM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Cc: "Mooney, Jennifer" <jenmoon@vt.edu>, "Ferguson, Laura" <lauraf92@vt.edu>

Prof. Tracy,

Your email was forwarded to me, and I approve the inclusion of 1105 and 1106 in your new degree. I wish you the best of luck with it!

On Wed, Oct 21, 2020 at 3:45 PM Ferguson, Laura <lauraf92@vt.edu> wrote:

Hi Rebecca,

I've copied Jen here too for a head's up on scheduling purposes! Typically the Chair has been the one to respond to these requests in the past. We've approved this for them before! I believe he's working on getting the proposal in this week if you could kindly email Benjamin back and copy me!

Many thanks,

Laura

Laura Ferguson

Advising Coordinator

Department of English

329C Shanks Hall

[181 Turner St NW](#)

Virginia Tech

Blacksburg, VA 24061

540.231.6515

liberalarts.vt.edu/english

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From: "Benjamin F. Tracy" <bftracy@vt.edu>

Date: Friday, October 16, 2020 at 6:26 PM

To: Laura Ferguson <lauraf92@vt.edu>

[Quoted text hidden]

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for revised majors

4 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Kring, Timothy" <timkring@vt.edu>

Wed, Jan 15, 2020 at 7:21 AM

Hello Tim - You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. The courses associated with the revised majors are listed below (please note inclusion of Pesticide Usage in these revised majors). If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben

Crop and Soil Science Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Landscape Design and Turfgrass Science Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Plant Science Major

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Environmental Horticulture Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

--

Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
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185 Ag. Quad Lane (MC 0404)
Blacksburg, Va 24061
[Email:bftracy@vt.edu](mailto:bftracy@vt.edu)
Office Ph: 540.231.8259



Kring, Timothy <timkring@vt.edu>
To: "Tracy, Benjamin F." <bfrtracy@vt.edu>

Wed, Jan 15, 2020 at 7:38 AM

Good morning Ben.

Yes, I do remember, and I approve the inclusion of these courses in the revised majors.

Tim

Tim Kring, Head

Department of Entomology

(540) 231-6341

Pronouns: he/him/his



[Quoted text hidden]

Kring, Timothy <timkring@vt.edu>
To: "Tracy, Benjamin F." <bfrtracy@vt.edu>

Wed, Jan 15, 2020 at 7:40 AM

Good morning again, Ben.

As an aside, yesterday I spoke with the new instructor (Tim McCoy) of Pesticide Usage today, and he and Daniel Frank (director of VT Pesticides Program) will visit with you and Jen (and anyone else you suggest) to discuss course content of 4254. The cancellation this year is a good thing, in many ways, as the course will appear very different as always happens with new instructors.

FYI, the CHEM prerequisite (which currently shows CHEM 2515 or CHEM 2536) is in the process of being dropped. Actually, I think CHEM 2515 is a typo, should have been CHEM 2514, Survey of Organic Chem, but that's irrelevant as neither will be prerequisites.

Have a great day,

Tim

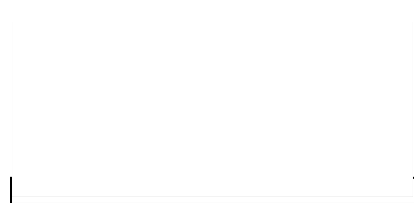
From: Benjamin F. Tracy <bftracy@vt.edu>
Sent: Wednesday, January 15, 2020 7:22 AM
To: Kring, Timothy <timkring@vt.edu>
Subject: Course approvals for revised majors

Hello Tim - You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. The courses associated with the revised majors are listed below (please note inclusion of Pesticide Usage in these revised majors). If you agree to these inclusions, an email response should suffice.

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>
To: "Kring, Timothy" <timkring@vt.edu>

Wed, Jan 15, 2020 at 8:10 AM

Great. Thanks Tim. Just let Jen and I know when you want to meet to discuss Pesticide Usage.

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new and revised majors

4 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Rogers, Robert" <rogers@vt.edu>

Wed, Jan 15, 2020 at 7:06 AM

Hello Bob: As part of our new proposed Plant Science degree, we are also revising existing majors and creating 1 new major. We are seeking approval to include several courses from your Department. These courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the new and revised major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,

Ben

Plant Science Major

Pathways Quantitative and Comp. Thinking
MATH 1025, 2016

Environmental Horticulture Major

Pathways Quantitative and Comp. Thinking
MATH 1014

Crop and Soil Sciences Major

Pathways Quantitative and Comp. Thinking
MATH 1014

Landscape Design and Turfgrass Science Major

Pathways Quantitative and Comp. Thinking
MATH 1014

--

Benjamin F. Tracy, PhD
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Office Ph: 540.231.8259



COLLEGE OF AGRICULTURE AND LIFE SCIENCES
**SCHOOL OF PLANT AND
ENVIRONMENTAL SCIENCES**
VIRGINIA TECH™

Robert Rogers <rogers@vt.edu>
To: "Benjamin F. Tracy" <bftracy@vt.edu>

Wed, Jan 15, 2020 at 7:33 AM

Ben -

The Department of Mathematics supports your department's curriculum revisions. Since the MATH courses to be included on the new checksheets (listed below) are on the old checksheets, we expect to be able to teach these with no new resources.

Bob

1/15/2020

Virginia Tech Mail - Course approvals for new and revised majors

[Quoted text hidden]

--

Robert C. Rogers
Professor and Associate Chair
460 McBryde Hall
Department of Mathematics
Virginia Tech
Virginia Tech students can make appointments using Navigate.
Use Care Unit - Advising, Location - McBryde,
Service - Exploring Mathematics.

Robert Rogers <rogers@vt.edu>
To: "Benjamin F. Tracy" <bfracy@vt.edu>

Wed, Jan 15, 2020 at 7:34 AM

Ben -

If you want the previous email on letterhead, I'll be happy to oblige. The email is usually enough.

Bob

On 1/15/20 7:06 AM, Benjamin F. Tracy wrote:

[Quoted text hidden]

[Quoted text hidden]

Benjamin F. Tracy <bfracy@vt.edu>
To: Robert Rogers <rogers@vt.edu>

Wed, Jan 15, 2020 at 7:39 AM

This should be fine - thanks Bob

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new Plant Science degree

3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Fri, Oct 16, 2020 at 6:25 PM

To: Anne Driscoll <agryan@vt.edu>

Hello Anne - I am not sure if you are still the person to contact about this, but the School of Plant and Environmental Sciences is creating a new Plant Science degree with 4 majors. We are seeking approval to include STAT 3615 Biological Statistics as a Pathways requirement for our new Plant Science major (proposed checksheet attached). We probably will not have many students in this major to start (maybe 10-15) so I don't think it will impact enrollment much. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

--

Benjamin F. Tracy, PhD

Associate Director of Undergraduate Programs

School of Plant and Environmental Sciences - Virginia Tech

185 Ag. Quad Lane (MC 0404)

Blacksburg, Va 24061

Email: bftracy@vt.edu

Office Ph: 540.231.8259



PLSC Checksheet 10.16.20.docx

28K

Benjamin F. Tracy <bftracy@vt.edu>
To: Anne Driscoll <agryan@vt.edu>

Wed, Oct 21, 2020 at 3:27 PM

Hi Anne - Sorry to bug you again, but I was hoping to get this major proposal submitted sometime this week. When you have a chance, please let me know whether your department would approve of us listing STAT 3615 the new checksheet for the Plant Science major.

Thanks!

[Quoted text hidden]

Anne Driscoll <agryan@vt.edu>
To: "Benjamin F. Tracy" <bftracy@vt.edu>

Wed, Oct 21, 2020 at 10:50 PM

Hi Ben,

I spoke with our department head, Dave Higdon, and we approve your request to Stat 3615 to your checksheet. Please let us know if you need anything else.

Best,
Anne

On Oct 21, 2020, at 3:28 PM, Benjamin F. Tracy <bftracy@vt.edu> wrote:

[Quoted text hidden]



COLLEGE OF AGRICULTURE AND LIFE SCIENCES
SCHOOL OF PLANT AND
ENVIRONMENTAL SCIENCES
VIRGINIA TECH.

School of Plant and
Environmental Sciences
185 Ag. Quad Lane
Smyth Hall (0404)
Blacksburg, Virginia 24061
bftracy@vt.edu

To: CALS Curriculum Committee

From: Benjamin Tracy, Associate Director for Undergraduate Programs- School of Plant and Environmental Sciences (SPES)

Date: 16 October 2020

Re: Landscape Design and Turfgrass Science (LTS) major

The School of Plant and Environmental Sciences (SPES) seeks to merge two-degree programs and create a new Bachelor of Science (B.S.) in Plant Science. The two programs to be merged include the B.S. in Crop and Soil Environmental Sciences and the B.S. in Horticulture. The merged degree program in Plant Science will offer four majors: 1) Crop and Soil Sciences (CSSC), 2) Landscape Design and Turfgrass Science (LTS), 3) Plant Science (PLSC), and 4) Environmental Horticulture (EVHT). The School of Plant and Environmental Sciences supports inclusion of the new Landscape Design and Turfgrass Science major to be housed under the new Plant Sciences degree.

Sincerely,

Benjamin F Tracy, PhD
Associate Director of Undergraduate Programs

Proposal for a new Major in Landscape Design and Turfgrass Science

To: CALS Undergraduate Curriculum Committee, Commission on Undergraduate Studies and Policies, University Council, University Curriculum Committee

From: Benjamin Tracy, Associate Director Undergraduate Programs, School of Plant and Environmental Sciences.

Date: 10.16.20

The School of Plant and Environmental Sciences (SPES) with the cooperation of the College of Agriculture and Life Sciences is proposing a new major: Landscape Design and Turfgrass Science (LTS). The new major will be housed under the B.S. degree in Plant Science.

Need for program:

The School of Plant and Environmental Sciences (SPES) was formed in July 2018 by merging three departments: Crop and Soil Environmental Science (CSES), Horticulture (HORT), and Plant Pathology, Physiology, and Weed Science (PPWS). This merger prompted the newly integrated faculty to convene and discuss options for the undergraduate programs, which consisted of three B.S. degrees spanning the three former departments. From these discussions, it was determined that the merger of two degrees, the B.S. in Crop and Soil Environmental Sciences and the B.S. in Horticulture, into one B.S. in Plant Science degree would best serve the students by providing a unified, integrated curriculum with a wider breadth of subject material and expertise that would make graduates of the program more competitive for jobs in the public and private sector. The proposed degree program will offer four majors: 1) Crop and Soil Sciences, **2) Landscape Design and Turfgrass Science**, 3) Plant Science, and 4) Environmental Horticulture. Each major will provide a discrete and specialized knowledge of a disciplinary or interdisciplinary area that will prepare graduates for employment in that field.

The new major in Landscape Design and Turfgrass Science (LTS) represents a merger of the Landscape Horticulture and Design major formerly under the B.S. in Horticulture, and Turfgrass Management option previously under the B.S. in Crop and Soil Environmental Science. Merging these two programs is proposed for several reasons: First, the fields of Landscape Design and Turfgrass Science share similar attributes and students need some of the same skills and training to be successful in their professions. By providing a unified core of required courses, we can ensure LTS graduates will get the training they need while making more efficient use of College and faculty resources. Secondly, we believe merger of the programs will help increase enrollment. We have designed a new curriculum specifically tailored for students interested in the Landscape Design and Turfgrass Science fields that should make the major more accessible to a wider array of students. We also believe elevation of the Turfgrass Management option to a major will increase its visibility and attract more students. Faculty have reported that the current option is often overlooked by prospective turfgrass students who end up applying to

other programs. Lastly, the B.S. degrees in Horticulture and Crop and Soil Environmental Sciences will be discontinued with approval of the new Plant Science degree. The Landscape Horticulture and Design major and Turfgrass Management option will be discontinued with the degrees so the new major will fill a critical gap in the School's curriculum.

Program Requirements:

Virginia Tech Pathways to General Education (45 credits) Credits

Discourse	3
ENGL 1105: First-Year Writing	(3)
ENGL 1106: First-Year Writing	(3)
Critical Thinking in the Humanities	6
Reasoning in the Social Sciences	6
AAEC 1005: Economic of the Food and Fiber System, <i>Or</i> ECON 2005: Principles of Economics	(3)
Selection of approved course	(3)
Reasoning in the Natural Sciences	6
Quantitative and Computational Thinking	9
Math 1014: Precalculus	(3)
Selection of approved course	(3)
Selection of approved course	(3)
Critique and Practice in Design and the Arts	6
Critical Analysis of Identity and Equity in the United States	3

Degree Core Courses (25 credits)

ALCE 3624: Communicating Agriculture and Life Sciences in Writing, <i>Or</i> ALCE 3634: Communicating Agriculture and Life Sciences in Speaking	3
ALS 1234: CALS First Year Seminar	1
BIOL 1105: Principles of Biology	3
BIOL 1106: Principles of Biology	3
ENSC 1015: Foundations of Environmental Science	3
HORT/BIOL 2304: Plant Biology	3
PPWS 2104: Plants, Genes, and People	3
PPWS 4104: Plant Pathology	4
CSES 4864: Plant Science Capstone	2

Landscape Design and Turfgrass Science Major Requirements (21 credits)

AAEC 2434: Foundations of Agribusiness	3
AAEC 3454: Small Business Management & Entrepreneurship	3
CSES 2564: Turfgrass Management	3
CSES/ENSC 3134: Soils in the Landscape	3

ENT 4254: Insect Pest Management	3
HORT 2224: Horticulture Science & Industry	2
HORT 2234: Environ Factors in Horticulture	3
HORT 2244: Plant Propagation	3

Landscape Design Concentration Requirements (11 credits)

HORT 4504: Landscape Contracting	2
HORT 4545: Research Landscape Design	4
HORT 3325 or 3326: Woody Landscape Plants	3
HORT 3345: Herbaceous Landscape Plants	2

Landscape Design Restricted Electives (Choose 7 credits from list below)

ALS 3404: Ecological Agriculture: Theory and Practice	3
CSES/ENSC 3644: Plant for Environmental Restoration	3
ENT 2004: Insects and Human Society	3
HORT 2144: Indoor Plants	3
HORT 2164: Floral Design	3
HORT 2184: Plants Places Culture Globally	3
HORT 2233: Plant Propagation	3
HORT 4205: Public Gardens Maintenance & Management	1
HORT 4206: Public Gardens Maintenance & Management	1
HORT 4614: Ornamental Plant Production & Marketing	3
HORT/FREC 3354: Trees in the Built Environment	3
HORT/CSES 3444: World Crops & Systems	3
HORT 4546: Research Landscape Design	4

Turfgrass Science Concentration Requirements (6 credits)

CSES 3564: Golf and Sports Turf Management	3
HORT 2234: Environmental Factors in Horticulture	3

Turfgrass Science Restricted Electives (Choose 12 credits from list below)

ENT 2004: Insects and Human Society	3
ALCE 3014: Leadership Effective for Agriculture	3
HORT 2144: Indoor Plants	3
HORT 2244: Plant Propagation	3
HORT 2184: Plants Places Culture Globally	3
HORT 4205: Public Gardens Maintenance & Management	1
HORT 4206: Public Gardens Maintenance & Management	1
HORT 4504: Landscape Contracting	2
HORT 4545: Research Landscape Design	4
HORT 4546: Research Landscape Design	4

Whom program will serve:

The new Plant Science degree will enroll approximately 160 students in Fall 2020. We predict the Landscape Design and Turfgrass Science major will enroll between 25-30 students and increase by 10-20% over the next 5 years. The major will serve students who want to learn to design, build, and manage aesthetic as well as functional landscapes and turfgrass systems using science-based practices and business decision-making skills that improve the living environment and contribute to environmental sustainability. Graduates from the new major may find jobs working at landscape firms or lawncare/sports turf care companies in design and management role, golf-course management, athletic and recreational field management, lawn maintenance service, the landscaping industry, and sod production. The U.S. Bureau of Labor Statistics projects employment in the Landscape Design and Turfgrass Science fields to grow approximately 10 percent from 2018 to 2028, faster than the average for all occupations. Job prospects should be very good.

Resource needs:

Virginia Tech and the School of Plant and Environmental Sciences have all of the faculty, classified support staff, equipment, library, and other resources necessary to administer the new Major in Landscape Design and Turfgrass Science. No new faculty, staff or equipment will be requested to support the major.

Administration:

The Landscape Design and Turfgrass Science major will be administered by the School of Plant and Environmental Sciences within the College of Agriculture and Life Sciences. First student enrollment is anticipated for Fall 2021 with first graduation Spring 2025. Students currently in the Landscape Horticulture and Design major and Turfgrass Management option will be allowed to complete their existing programs by Spring 2025. No students will be allowed to enroll in the Landscape Horticulture and Design major or Turfgrass Management option after Spring 2021.

**College of Agriculture and Life Sciences
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Pathways to General Education (44-47 credits) Concept 1

– Discourse (9 credit hours)

1F – Foundational

___ (3) ENGL 1105 First-Year Writing (3 credits) – F, S

___ (3) ENGL 1106 First-Year Writing (3 credits) – F, S, SI, SII

1A – Advanced/Applied

___ (3) – F, S, W, SI, SII

Concept 2 – Critical Thinking in the Humanities (6 credits)

___ (3) – F, S, W, SI, SII

___ (3) – F, S, W, SI, SII

Concept 3 – Reasoning in the Social Sciences (6 credits)

___ (3) AAEC 1005 Econ Food Fiber Sys or ECON 2005 Principles of Economics – F, S

___ (3) – F, S, W, SI, SII

Concept 4 – Reasoning in the Natural Sciences (6 credits)

___ (3) CHEM 1035: General Chemistry* – F, S, SI, SII

___ (3) CHEM 1036: General Chemistry* – F, S, SI, SII

Concept 5 – Quantitative and Computational Thinking (11 credits)

5f – Foundational (8 credits)

___ (3) MATH 1014: Precalc with Transcendental – F, S, SI, SII

___ (3) – F, S, SI, SII

5a – Advanced/Applied (3 credits)

___ (3) – F, S

Concept 6 – Critique and Practice in Design and the Arts (6 credits)

6d – Design

___ (3) – F, S, W, SI, SII

6a – Arts

___ (3) – F, S, W, SI, SII

Concept 7 – Critical Analysis of Identity and Equity in the United

States (3 credits) (may be double-counted with another Pathways concept)

___ (3) – F, S, W, SI, SII

Plant Science Degree Core Requirements (25 credits)

___ (1) ALS 1234: CALS First Year Seminar – F

___ (3) ALCE 3634: Comm Ag & Life Sci in Speaking – F, S

___ *or* ALCE 3624: Comm Agriculture in Writing – F, S

___ (3) BIOL 1105: Principles of Biology – F, W, SI

___ (3) BIOL 1106: Principles of Biology – F, W, SI

___ (3) ENSC 1015: Found Environmental Sci – F

___ (3) HORT/BIOL 2304: Plant Biology* – F, S

___ (3) PPWS 2104: Plants, Genes, and People* – F

___ (4) PPWS 4104: Plant Pathology – F

___ (2) SPES 4864: Plant Science Capstone* – TBD

Landscape Design and Turfgrass Science Major Requirements (24 credits)

___ (3) AAEC 2434: Foundations of Agribusiness* – F, S

___ (3) AAEC/MGT 3454: Small Bus Mgt and Ent* – S

___ (3) CSES 2564: Turfgrass Management* – F

___ (3) CSES 3114/ENSC 3114/GEOS 3614: Soils* – F

___ (1) CSES 3124/ENSC 3124/GEOS 3624: Soils Laboratory* – F

___ (3) ENT 4254: Insect Pest Management* – S

___ (2) HORT 2224: Horticulture Science & Industr – F

___ (3) HORT 2234: Envir Factors in Hort – S

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.
Key:

F – Fall

S – Spring

W – Winter

SI – Summer, Part I

SII – Summer, Part II

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Landscape Design Concentration Requirements (11 credits)

- ___ (2) HORT 4504: Landscape Contracting* – F
- ___ (4) HORT 4545: Res Landscape Design* – F
- ___ (3) HORT 3325 or 3326: Woody Landscape Plants – F or S
- ___ (2) HORT 3324: Herbaceous Landscape Plants* – F, S

Landscape Design Concentration Restricted Electives (Choose 7 credits from list below)

- ___ (3) ALS 3404: Ecological Agriculture: Theory and Practice
- ___ (3) ENT 2004: Insects and Human Society – F, S
- ___ (3) ENT/PPWS 4264: Pesticide Usage* – S
- ___ (3) CSES/ENSC 3644: Plant for Env Rest* – S
- ___ (3) HORT 2144: Indoor Plants – F, S
- ___ (3) HORT 2164: Floral Design-F, S
- ___ (3) HORT 2184: Plants Places Culture Globally – S
- ___ (3) HORT 2244: Plant Propagation – S
- ___ (1) HORT 4205: Public Gardens Maint & Mgt - F
- ___ (1) HORT 4206: Public Gardens Maint & Mgt - S
- ___ (3) HORT 4614: Ornamental Plant Prod & Market* - S
- ___ (3) HORT/FREC 3354: Trees in the Built Environment* - F
- ___ (3) HORT/CSES 3444: World Crops & Systems - S
- ___ (4) HORT 4545: Res Landscape Design* – F
- ___ (4) HORT 4546: Res Landscape Design* - S

Turfgrass Science Concentration Requirements (6 credits)

- ___ (3) CSES 3564: Golf and Sports Turf Management* - F
- ___ (3) CSES 4214: Soil Fertility and Management* - F

Turfgrass Science Concentration Restricted Electives (Choose 12 credits from list below)

- ___ (3) ALCE 3014: Leadership Effective for Ag - F
- ___ (3) ENT 2004: Insects and Human Society – F, S
- ___ (3) ENT/PPWS 4264: Pesticide Usage* - S
- ___ (3) HORT 2144: Indoor Plants – F, S
- ___ (3) HORT 2184: Plants Places Culture Globally – S
- ___ (3) HORT 2244: Plant Propagation – S
- ___ (1) HORT 4205: Public Gardens Maint & Mgt - F
- ___ (1) HORT 4206: Public Gardens Maint & Mgt – S
- ___ (2) HORT 4504: Landscape Contracting - F
- ___ (4) HORT 4545: Res Landscape Design* – F
- ___ (4) HORT 4546: Res Landscape Design* - S

Free Electives (to reach 120 Total Credit Hours)

___ () _____

Note:

Total Hours Required: 120

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Satisfactory Progress:

By the end of the academic year in which the student has attempted 60 credits (including transfer, advanced placement, advanced standing and credit by examination), "satisfactory progress" toward a BS PLSC degree will include:

1. At least 24 credits that apply to the Pathways of General Education

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

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2. Passing the following courses:

MATH 1014, CHEM 1035 and 1036, HORT 2224 or 2234 or
2244, 6 additional HORT courses, 6 credits from CSES/ENSC
3134, ENT 4254, PPWS 4104

GPA Requirements:

- Overall GPA: 2.0 (each semester in order to be in good academic standing)
- In-major GPA: 2.0 (by the time the student graduates)
 - Includes classes in: CSES, ENT, HORT, and PPWS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

*Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.
Key:

F – Fall
S – Spring
W – Winter
SI – Summer, Part I
SII – Summer, Part II



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for revised majors

3 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Ellerbrock, Mike" <mebro@vt.edu>

Wed, Jan 15, 2020 at 7:20 AM

Hello Mike- You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. Many of these courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the revised majors are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben

Pathways Reasoning in the Social Sciences

AAEC: 1105 Econ Food Fiber (all majors)

Crop and Soil Science Major

Core Courses

AAEC 2434: Foundations of Agribusiness

Restricted Electives

AAEC/FIN 2104: Personal Financial Planning

AAEC 3004: Agricultural Production and Consumption Economics

AAEC 3314: Environmental Law

AAEC 3504: Marketing Agricultural Products

AAEC 3604: Agricultural Law

Landscape Design and Turfgrass Science Major

Core Courses

AAEC 2434: Foundations of Agribusiness

Environmental Horticulture Major

Core Courses

AAEC 2434: Foundations of Agribusiness

AAEC/MGT 3454: Small Business Management & Entrepreneurship

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Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
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[Email:bftracy@vt.edu](mailto:bftracy@vt.edu)
Office Ph: 540.231.8259



Ellerbrock, Mike <mebroock@vt.edu>

Wed, Jan 15, 2020 at 10:07 AM

To: "Tracy, Benjamin F." <bftracy@vt.edu>

Cc: "Holt, Matthew" <mattholt@vt.edu>, "White, Katie" <katiwhite@vt.edu>, "Norton, George" <gnorton@vt.edu>, "Stephenson, Kurt" <kurts@vt.edu>, "Isengildina Massa, Olga" <oimassa@vt.edu>, "Stewart, Shamar" <stewartls@vt.edu>

Hi Ben,

Yes – we always welcome your students in these AAEC courses.

Nice doing business with you!

Mike

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>

Wed, Jan 15, 2020 at 12:46 PM

To: "Ellerbrock, Mike" <mebroock@vt.edu>

Many thanks again, Mike!

[Quoted text hidden]



Benjamin F. Tracy <bfracy@vt.edu>

ALCE courses in new Plant Science degree

Friedel, Curtis <cfriedel@vt.edu>

Mon, Dec 2, 2019 at 12:39 PM

To: "Tracy, Benjamin F." <bfracy@vt.edu>

Hi Ben,

Sorry for my delay in getting back to you. Yes, we approve of including ALCE 3624 Comm. in Ag. Writing OR ALCE 3634 Comm. in Ag. Life Sci Speaking, in the core of the new merged degree program in Plant Science. Based on this enrollment projection estimate, we would not need any additional resources.

I would also add, for future planning, we are in process of having both courses approved for the Pathways general education curriculum in Discourse (1a).

Respectfully,

-Curt

Curtis R. Friedel, Ph.D.

Associate Professor | Undergraduate Program Director

Department of Agricultural, Leadership, & Community Education (0343)

Virginia Tech | 214-C Litton-Reaves Hall

[175 West Campus Drive, Blacksburg, VA 24061](#)

[Ph: \(540\) 231-8177](tel:5402318177) | email: cfriedel@vt.edu

<http://www.alce.vt.edu/student-info/undergraduate.html>

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

BHCM courses in new Plant Science Degree3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Mon, Nov 25, 2019 at 3:28 PM

To: zhujin@vt.edu

Dear Dr. Zhu - I am currently Undergraduate Program Director in the School of Plant and Environmental Sciences. We are in the process of creating a merged degree in Plant Science that will contain 1 new, and 3 revised majors (current curriculum structure attached). We are requesting permission to include the courses below on our new checksheets. If you agree to this, a response via email would be fine.

Of course, if there are any questions or concerns please let me know.

Courses:

BCHM 3114 Biochem for Biotech (required for Plant Science major - projected enrollment increase ~ 5-10 students/yr)


BCHM 2114 - Biochemical Calculations (Restricted elective - projected enrollment increase - 2-3 students/yr.)

BCHM 4054 - Genomics (Restricted elective - projected enrollment increase - 2-3 students/yr.)

Regards,
Ben Tracy

Benjamin F. Tracy, PhD
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Office Ph: 540.231.8259



 Proposed Plant Science curriculum 11.25.19.xlsx
22K

zhujin@vt.edu <zhujin@vt.edu>

Wed, Nov 27, 2019 at 9:25 AM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Hi Ben,

You have our permission to include the courses on your checksheets.

Happy Thanksgiving.

Jinsong

Jinsong Zhu

Professor

Department of Biochemistry

Virginia Tech

Blacksburg, VA 24061

540-231-3841

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>
To: zhujin@vt.edu

Wed, Nov 27, 2019 at 9:45 AM

Thank you, you too!

[Quoted text hidden]

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[Quoted text hidden]

To: Benjamin Tracy, Associate Director Undergraduate Programs, School of Plant and Environmental Sciences

From: Richard Walker, Associate Department Head, Biological Sciences

Re: Inclusion of BIOL courses on SPES checksheets

Date: November 30, 2019

The Department of Biological Sciences supports inclusion of the following BIOL courses as requested by the School of Plant and Environmental Sciences. Please note seat availability in these courses is dependent on continued funding support from the College of Science and the university.

Plant Science Degree Core

BIOL 1105 Principles of Biology

Plant Science Major requirement

BIOL 1106 Principles of Biology

Crop and Soil Science Major Restricted Electives

BIOL 1106 Principles of Biology

BIOL 2804 Ecology

Plant Science Major Restricted Electives

BIOL 2004 Genetics

BIOL 2134 Cell Function and Differentiation

BIOL 4134 Evolutionary Genetics

BIOL 4334 Chemical Ecology



Benjamin F. Tracy <bfracy@vt.edu>

CHEM courses in new Plant Science degree

3 messages

Benjamin F. Tracy <bfracy@vt.edu>
To: Patricia Amateis <pamateis@vt.edu>

Mon, Nov 25, 2019 at 4:35 PM

Dear Patricia - I am currently Undergraduate Program Director in the School of Plant and Environmental Sciences. We are in the process of creating a merged degree in Plant Science that will contain 1 new, and 3 revised majors (current curriculum structure attached). We are requesting permission to include the courses below on our new checksheets. If you agree to this, a response via email would be fine.

Of course, if there are any questions or concerns please let me know.

Thanks!
Ben

Courses:
Pathways:
CHEM 1035, 1036 General Chemistry (required for 2 majors - projected enrollment increase 5-10 students/yr.)


Major Requirements:
CHEM 1045, 1046 General Chemistry Lab (required for 2 majors - projected enrollment increase 5-10 students/yr.)

CHEM 2535, 2536 Organic Chemistry (required for 1 major - projected enrollment increase 5-10 students/yr.)
CHEM 2545, 2546 Organic Chemistry Lab (required for 1 major - projected enrollment increase 5-10 students/yr.)

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Office Ph: 540.231.8259



 Proposed Plant Science curriculum 11.25.19.xlsx
22K

Patricia Amateis <pamateis@vt.edu>
To: "Benjamin F. Tracy" <bfracy@vt.edu>

Sat, Nov 30, 2019 at 4:54 PM

Hi Benjamin,

Yes, I agree to include CHEM 1035, 1036, 1045, 1046, 2535, 2536, 2545, and 2546 to the appropriate checksheets.

Patricia Amateis
Director of Undergraduate Education
Chemistry Department
[Quoted text hidden]

Benjamin F. Tracy <bfrtracy@vt.edu>
To: Patricia Amateis <pamateis@vt.edu>

Mon, Dec 2, 2019 at 12:04 PM

Great, thanks, Patricia!
[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new and revised major

3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Wed, Jan 15, 2020 at 10:59 AM

To: melaniefox@vt.edu

Hello Melanie - As part of our new proposed Plant Science degree, we are revising existing majors and creating 1 new major. We are and seeking approval to include courses from your Department. The courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the new and revised major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

Pathways (Reasoning in the Social Sciences)**ECON 2005: Principles of Econ Food Fiber (for all majors)**

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Office Ph: 540.231.8259



Melanie Fox <melaniefox@vt.edu>

Mon, Jan 20, 2020 at 8:59 PM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Hi Benjamin,
Consider this approved! Let me know if you need more.

Melanie Fox, PhD
Undergraduate Director
melaniefox@vt.edu

[Quoted text hidden]

Benjamin F. Tracy <bftracy@vt.edu>

Tue, Jan 21, 2020 at 9:38 AM

To: Melanie Fox <melaniefox@vt.edu>

Thank you!

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new Plant Science degree

5 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: lauraf92@vt.edu

Fri, Oct 16, 2020 at 6:27 PM

Hello Laura - I am not sure if you are still the person to contact about this, but the School of Plant and Environmental Sciences is creating a new Plant Science degree with 4 majors. We are seeking approval to include several courses from your Department. The courses associated major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

Pathways (Discourse) required for all majors

__ ENGL 1105	(3)	First Year Writing
__ ENGL 1106	(3)	First Year Writing

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Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
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Benjamin F. Tracy <bftracy@vt.edu>

Wed, Oct 21, 2020 at 3:31 PM

To: Laura Ferguson <lauraf92@vt.edu>

Hello Laura - sorry to bug you again, but I was hoping to get this major proposal submitted sometime this week. When you have a chance, please let me know whether your department would approve of us listing ENGL 1105/1106 on the new checksheets for majors associated with the proposed Plant Science degree. Or maybe let me know who I should contact about this?

Thanks!

[Quoted text hidden]

Ferguson, Laura <lauraf92@vt.edu>

Thu, Oct 22, 2020 at 2:55 AM

To: "Tracy, Benjamin F." <bfracy@vt.edu>

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From: Derek Mueller <dmueller@vt.edu>

Sent: Wednesday, October 21, 2020 4:52 PM

To: Mooney, Jennifer

Cc: Ferguson, Laura; Weaver-Hightower, Rebecca

Subject: Re: FW: Course approvals for new Plant Science degree

Hi everyone,

Yes, it is entirely appropriate from every angle I can see for Plant Sciences to include the first-year writing sequence in their programs of study/check-sheets.

All the best,

Derek

[Quoted text hidden]

--

Jennifer Mooney, Ph.D.

Assistant Chair, Department of English

Senior Instructor of English

Department of English (MC0112)

323 Shanks Hall

Virginia Tech

[181 Turner St. NW](#)

Blacksburg, VA 24061

--

Derek N. Mueller (he/him)

Associate Professor // Director of Composition

Department of English, Virginia Tech
+1-540-231-1738 // dmueller@vt.edu
<http://www.derekmueller.net/rc/>
[Schedule a conference](#)

Ferguson, Laura <lauraf92@vt.edu>

Thu, Oct 22, 2020 at 2:57 AM

To: "Tracy, Benjamin F." <bftracy@vt.edu>

No problem at all, I totally understand the need for timeliness! Our Director of Composition, Derek Mueller, has approved and I have forwarded his email to you. Please let me know if we can help with anything else!

Laura

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From: Benjamin F. Tracy <bftracy@vt.edu>

Sent: Wednesday, October 21, 2020 3:31:09 PM

To: Ferguson, Laura <lauraf92@vt.edu>

Subject: Re: Course approvals for new Plant Science degree

[Quoted text hidden]

Rebecca Weaver-Hightower <rebeccawh@vt.edu>

Thu, Oct 22, 2020 at 6:23 AM

To: "Benjamin F. Tracy" <bftracy@vt.edu>

Cc: "Mooney, Jennifer" <jenmoon@vt.edu>, "Ferguson, Laura" <lauraf92@vt.edu>

Prof. Tracy,

Your email was forwarded to me, and I approve the inclusion of 1105 and 1106 in your new degree. I wish you the best of luck with it!

On Wed, Oct 21, 2020 at 3:45 PM Ferguson, Laura <lauraf92@vt.edu> wrote:

Hi Rebecca,

I've copied Jen here too for a head's up on scheduling purposes! Typically the Chair has been the one to respond to these requests in the past. We've approved this for them before! I believe he's working on getting the proposal in this week if you could kindly email Benjamin back and copy me!

Many thanks,

Laura

Laura Ferguson

Advising Coordinator

Department of English

329C Shanks Hall

[181 Turner St NW](#)

Virginia Tech

Blacksburg, VA 24061

540.231.6515

liberalarts.vt.edu/english

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From: "Benjamin F. Tracy" <bftracy@vt.edu>

Date: Friday, October 16, 2020 at 6:26 PM

To: Laura Ferguson <lauraf92@vt.edu>

[Quoted text hidden]

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Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for revised majors

4 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Kring, Timothy" <timkring@vt.edu>

Wed, Jan 15, 2020 at 7:21 AM

Hello Tim - You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. The courses associated with the revised majors are listed below (please note inclusion of Pesticide Usage in these revised majors). If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben

Crop and Soil Science Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Landscape Design and Turfgrass Science Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Plant Science Major

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

Environmental Horticulture Major

Core Courses

ENT 4254: Insect Pest Management

Restricted Electives

ENT 2004: Insects and Human Society

ENT 4264: Pesticide Usage

--

Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
School of Plant and Environmental Sciences - Virginia Tech
185 Ag. Quad Lane (MC 0404)
Blacksburg, Va 24061
[Email:bftracy@vt.edu](mailto:bftracy@vt.edu)
Office Ph: 540.231.8259



Kring, Timothy <timkring@vt.edu>
To: "Tracy, Benjamin F." <bfrtracy@vt.edu>

Wed, Jan 15, 2020 at 7:38 AM

Good morning Ben.

Yes, I do remember, and I approve the inclusion of these courses in the revised majors.

Tim

Tim Kring, Head
Department of Entomology
(540) 231-6341
Pronouns: he/him/his



[Quoted text hidden]

Kring, Timothy <timkring@vt.edu>
To: "Tracy, Benjamin F." <bfrtracy@vt.edu>

Wed, Jan 15, 2020 at 7:40 AM

Good morning again, Ben.

As an aside, yesterday I spoke with the new instructor (Tim McCoy) of Pesticide Usage today, and he and Daniel Frank (director of VT Pesticides Program) will visit with you and Jen (and anyone else you suggest) to discuss course content of 4254. The cancellation this year is a good thing, in many ways, as the course will appear very different as always happens with new instructors.

FYI, the CHEM prerequisite (which currently shows CHEM 2515 or CHEM 2536) is in the process of being dropped. Actually, I think CHEM 2515 is a typo, should have been CHEM 2514, Survey of Organic Chem, but that's irrelevant as neither will be prerequisites.

Have a great day,

Tim

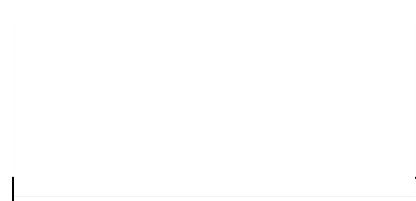
From: Benjamin F. Tracy <bftracy@vt.edu>
Sent: Wednesday, January 15, 2020 7:22 AM
To: Kring, Timothy <timkring@vt.edu>
Subject: Course approvals for revised majors

Hello Tim - You might remember that I contacted you in December regarding course approvals for our new Plant Science major. As part of our new degree, we are also revising existing majors and seeking approval to include several courses from your Department. The courses associated with the revised majors are listed below (please note inclusion of Pesticide Usage in these revised majors). If you agree to these inclusions, an email response should suffice.

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Benjamin F. Tracy <bftracy@vt.edu>
To: "Kring, Timothy" <timkring@vt.edu>

Wed, Jan 15, 2020 at 8:10 AM

Great. Thanks Tim. Just let Jen and I know when you want to meet to discuss Pesticide Usage.

[Quoted text hidden]



Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new and revised majors

4 messages

Benjamin F. Tracy <bftracy@vt.edu>
To: "Rogers, Robert" <rogers@vt.edu>

Wed, Jan 15, 2020 at 7:06 AM

Hello Bob: As part of our new proposed Plant Science degree, we are also revising existing majors and creating 1 new major. We are seeking approval to include several courses from your Department. These courses were on the old checksheets, but I'm going on the assumption that I will need approval nonetheless. The courses associated with the new and revised major(s) are listed below. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,

Ben

Plant Science Major

Pathways Quantitative and Comp. Thinking
MATH 1025, 2016

Environmental Horticulture Major

Pathways Quantitative and Comp. Thinking
MATH 1014

Crop and Soil Sciences Major

Pathways Quantitative and Comp. Thinking
MATH 1014

Landscape Design and Turfgrass Science Major

Pathways Quantitative and Comp. Thinking
MATH 1014

--

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COLLEGE OF AGRICULTURE AND LIFE SCIENCES
**SCHOOL OF PLANT AND
ENVIRONMENTAL SCIENCES**
VIRGINIA TECH™

Robert Rogers <rogers@vt.edu>
To: "Benjamin F. Tracy" <bftracy@vt.edu>

Wed, Jan 15, 2020 at 7:33 AM

Ben -

The Department of Mathematics supports your department's curriculum revisions. Since the MATH courses to be included on the new checksheets (listed below) are on the old checksheets, we expect to be able to teach these with no new resources.

Bob

1/15/2020

Virginia Tech Mail - Course approvals for new and revised majors

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Robert C. Rogers
Professor and Associate Chair
460 McBryde Hall
Department of Mathematics
Virginia Tech
Virginia Tech students can make appointments using Navigate.
Use Care Unit - Advising, Location - McBryde,
Service - Exploring Mathematics.

Robert Rogers <rogers@vt.edu>
To: "Benjamin F. Tracy" <bfracy@vt.edu>

Wed, Jan 15, 2020 at 7:34 AM

Ben -

If you want the previous email on letterhead, I'll be happy to oblige. The email is usually enough.

Bob

On 1/15/20 7:06 AM, Benjamin F. Tracy wrote:

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Benjamin F. Tracy <bfracy@vt.edu>
To: Robert Rogers <rogers@vt.edu>

Wed, Jan 15, 2020 at 7:39 AM

This should be fine - thanks Bob

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Benjamin F. Tracy <bftracy@vt.edu>

Course approvals for new Plant Science degree

3 messages

Benjamin F. Tracy <bftracy@vt.edu>

Fri, Oct 16, 2020 at 6:25 PM

To: Anne Driscoll <agryan@vt.edu>

Hello Anne - I am not sure if you are still the person to contact about this, but the School of Plant and Environmental Sciences is creating a new Plant Science degree with 4 majors. We are seeking approval to include STAT 3615 Biological Statistics as a Pathways requirement for our new Plant Science major (proposed checksheet attached). We probably will not have many students in this major to start (maybe 10-15) so I don't think it will impact enrollment much. If you agree to these inclusions, an email response should suffice.

Thanks and let me know if there are any questions

Regards,
Ben Tracy

--

Benjamin F. Tracy, PhD

Associate Director of Undergraduate Programs

School of Plant and Environmental Sciences - Virginia Tech

185 Ag. Quad Lane (MC 0404)

Blacksburg, Va 24061

Email: bftracy@vt.edu

Office Ph: 540.231.8259



PLSC Checksheet 10.16.20.docx

28K

Benjamin F. Tracy <bftracy@vt.edu>
To: Anne Driscoll <agryan@vt.edu>

Wed, Oct 21, 2020 at 3:27 PM

Hi Anne - Sorry to bug you again, but I was hoping to get this major proposal submitted sometime this week. When you have a chance, please let me know whether your department would approve of us listing STAT 3615 the new checksheet for the Plant Science major.

Thanks!

[Quoted text hidden]

Anne Driscoll <agryan@vt.edu>
To: "Benjamin F. Tracy" <bftracy@vt.edu>

Wed, Oct 21, 2020 at 10:50 PM

Hi Ben,

I spoke with our department head, Dave Higdon, and we approve your request to Stat 3615 to your checksheet. Please let us know if you need anything else.

Best,
Anne

On Oct 21, 2020, at 3:28 PM, Benjamin F. Tracy <bftracy@vt.edu> wrote:

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