THE UNIVERSITY OF ARIZONA

New Academic Program Workflow Form

General

Proposed Name: Entomology

Transaction Nbr: 00000000000176

Plan Type: Minor

Academic Career: Undergraduate

Degree Offered:

Do you want to offer a minor? N

Anticipated 1st Admission Term: Sprg 2023

Details

Department(s):

AGSC

DEPTMNT ID	DEPARTMENT NAME	HOST
1235	Entomology	Y

Campus(es):

MAIN

LOCATION	DESCRIPTION
TUCSON	Tucson

Admission application terms for this plan: Spring: Y Summer: Y Fall: Y

Plan admission types:

Freshman: Y Transfer: Y Readmit: Y Graduate: N

Non Degree Certificate (UCRT only): N

Other (For Community Campus specifics): N

Plan Taxonomy: 26.0702, Entomology.

Program Length Type: Program Length Value: 0.00

Report as NSC Program:

SULA Special Program:

Print Option:

Diploma: Y Minor in Entomology

Transcript: Y Minor in Entomology

Conditions for Admission/Declaration for this Major:

At the declaration of this minor, a minimum cumulative GPA of 2.0 is required.

Requirements for Accreditation:

N/A

Program Comparisons

University Appropriateness

The Minor in Entomology meets the UA strategic plan in addressing grand challenges of food security, climate change and vector borne diseases. The UA is the only land-grant university in the Arizona University System, and the only one with a department of Entomology. The Minor in Entomology is consistent with the College of Agriculture and Life Sciences strategic plan, in working with AZ tribes through research on insect vector borne disease, increasing food security through integrated pest management (IPM), development of future agricultural systems, and enhancing the Arizona economy.

Arizona University System

NBR	PROGRAM	DEGREE	#STDNTS	LOCATION	ACCRDT

Peer Comparison

Comparison chart attached.

Faculty & Resources

Faculty

Current Faculty:

INSTR ID	NAME	DEPT	RANK	DEGREE	FCLTY/%
01380349	Kathleen Walker	ENTOMOLOGY	Assoc. Prof	Doctor of Philosophy	1.00
01868877	Luciano Matzkin	ENTOMO	Assoc. Prof	Doctor of Philosophy	1.00

INSTR ID	NAME	DEPT	RANK	DEGREE	FCLTY/%
		LOGY			
01894229	Xianchun Li	ENTOMOLOGY	Professor	Doctor of Philosophy	1.00
05905975	John Palumbo	ENTOMOLOGY	Adj. Instor.	Doctor of Philosophy	1.00
06108436	Peter Ellsworth	ENTOMOLOGY	Adj. Instor.	Doctor of Philosophy	1.00
09100336	Martha Hunter	ENTOMOLOGY	Professor	Doctor of Philosophy	1.00
09109243	Bruce Tabashnik	ENTOMOLOGY	Professor	Doctor of Philosophy	1.00
10406845	Yves Carriere	ENTOMOLOGY	Professor	Doctor of Philosophy	1.00
11907415	Dawn Gouge	ENTOMOLOGY	Adj. Lect.	Doctor of Philosophy	1.00
12504156	Goggy Davidowitz	ENTOMOLOGY	Distinguished Prof	Doctor of Philosophy	1.00
12802236	Wendy Moore Brusca	ENTOMOLOGY	Assoc. Prof	Doctor of Philosophy	1.00
15005900	Michael Riehle	ENTOMOLOGY	Professor	Doctor of Philosophy	1.00
15107839	Alfred Fournier	ENTOMOLOGY	Adj. Lect.	Doctor of Philosophy	1.00
22071849	Todd Schlenke	ENTOMOLOG	Assoc. Prof	Doctor of Philosophy	1.00

INSTR ID	NAME	DEPTY	RANK	DEGREE	FCLTY/%
22084820	Tristan Mcknight	ENTOMOLOGY	Assit. Prof. Pract.	Doctor of Philosophy	1.00

Additional Faculty:

No additional faculty are needed for the initiation of this Minor.

Current Student & Faculty FTE

DEPARTMENT	UGRD HEAD COUNT	GRAD HEAD COUNT	FACULTY FTE
ENTOMOLOGY	0	0	1.00

Projected Student & Faculty FTE

	UGRD HEAD COUNT			GRAD HEAD COUNT			FACULTY FTE		
DEPT	YR 1	YR 2	YR 3	YR 1	YR 2	YR 3	YR 1	YR 2	YR 3
ENTOMOLOGY	9	12	15	0	0	0	15.00	16.00	16.00

Library

Acquisitions Needed:

No library acquisitions will be needed during the next three years.

Physical Facilities & Equipment

Existing Physical Facilities:

All existing facilities are adequate for this minor.

Additional Facilities Required & Anticipated:

No additional facilities or equipment will be needed.

Other Support

Other Support Currently Available:

Entomology Business Manager will provide administrative assistance. The CALS office of Career and Academic Services will provide advisors to the undergraduate students taking the minor.

Other Support Needed over the Next Three Years:

No additional support will be needed over the next three years.

Comments During Approval Process

10/4/2022 12:23 PM

MELANIECMADDEN

Comments
Updated Faculty FTE and

10/4/2022 12:24 PM

MELANIECMADDEN

Comments
Projected Student & Faculty FTE tables to remove outside departments per Rachel Doty and Goggy Davdowitz 10-4-2022

THE UNIVERSITY OF ARIZONA

New Academic Program – Minor (Undergraduate or Graduate)
CURRICULAR INFORMATION

I. MINOR DESCRIPTION:

Insects make up most multicellular life on earth. They cause harm by vectoring diseases, attacking crops, and damaging buildings. Insects also provide critical services such as pollination and are superb models for studying biological organization. They can even help us understand how the planet responds to climate change and how we can boost sustainability and reduce our carbon footprint. Students can tailor a Minor in Entomology to their own interests. The focus could include insect pest management, public health or medical entomology, and outreach, as well as insect genomics, conservation, education, systematics, behavior, ecology, physiology, and evolution. The minor is offered through the Department of Entomology, one of the highest ranked departments in this discipline in the U.S., with a wealth of expertise in both basic and applied fields.

II. JUSTIFICATION/NEED FOR THE MINOR:

This minor will provide students with advanced education and skills in insect-related fields to be competitive for graduate programs in disciplines such as Environmental Sciences, Public Health, Epidemiology, Ecology, and Entomology and for employment in agricultural and biotech industries. The target audience is undergraduates interested in a career associated with insects. This could be in Integrated Pest Management (IPM), agriculture, public health such as with insect borne diseases, biotech, systematics, or ecology. Students interested in these career paths will be more attractive to employers if they can demonstrate expertise and experience with insects. This minor can be an introductory pathway at UA to a graduate degree in Entomology and Insect Science (EIS-GIDP)

III. MINOR REQUIREMENTS

: Complete the table below. All University of Arizona undergraduate minors require at least 18 units; graduate minors require at least 9 units. Note: information in this section must be consistent throughout the proposal documents and will be used to build the Academic Advisement Report (ADVIP) or Graduate Catalog Program Descriptions. Please include letters of support for any courses not offered by the proposing department (see Workflow Input form). Delete the EXAMPLE column before submitting/uploading.

Undergraduate Minor: (if this table does not apply, please delete).

Minimum total units required	18
Minimum upper-division units required	9
Total transfer units that may apply to minor	6
List any special requirements to declare/admission to this minor (completion of specific	Minimum cumulative GPA of 2.0

coursework, minimum GPA, interview, application, etc.)	
Minor requirements. List all required minor requirements including core and electives. Courses listed must include course prefix, number, units, and title. Mark new coursework (New). Include any limits/restrictions needed (house number limit, etc.). Provide email(s)/letter(s) of support from home department head(s) for courses not owned by your department.	Required: 1) Insect Biology (ENTO 415R) AND 2) students must acquire three credits from at least one of the following options: Directed Research (ENTO 392, 492) Independent Study (ENTO 299, 299H, 399,499, 499H) Honors Thesis (ENTO 498H) Senior Capstone (ENTO 498) Internship (ENTO 393, 493) Preceptorship (ENTO 391, 391H, 491, 491H) Insect Discovery (ENTO 407) Electives: 12 additional units from list of approved courses below. Letters of support / emails for course not owned by Entomology are provided at the end of the certificate proposal <u>Electives:</u> Complete 12 units from the following. ENTO 160D1, 3, How Insects Shaped Human History ENTO 170C2, 3, How Insects Conquered Earth ENTO 300, 3, Insect Pest Management for Desert Cropping ENTO 401, 3, Ecological Physiology ENTO 407, 3, Insect Discovery ENTO 417, 4, Insect Systematics ENTO 432, 3, Comparative Immunology ENTO 436, 3, Agro Ecology ENTO 457, 3, Medical-Veterinary Entomology ENTO 468, 3, Integrated Pest Management ENTO 403R, 3, Biology Animal Parasites ENTO 497C, 3, Greenhouse Pest Management ENTO 405, 4, Aquatic Entomology
Internship, practicum, applied course requirements (Yes/No). If yes, provide description.	Three units of research or education experience. To fulfill this requirement students must acquire three credits from at least one of the following options: Directed Research (ENTO 392, 492) Independent Study (ENTO 299, 299H, 399,499, 499H) Honors Thesis (ENTO 498H) Senior Capstone (ENTO 498) Internship (ENTO 393, 493) Preceptorship (ENTO 391, 391H, 491, 491H) Insect Discovery (ENTO 407)

Additional requirements (provide description)	None
Any double-dipping restrictions (Yes/No)? If yes, provide description.	Insect Discovery (ENTO 407) can be used either for the research/education experience requirement or as an elective course, but not both.

IV. NEW COURSES NEEDED: If new courses are required for the proposed program, UA Course Add forms must be submitted before/simultaneously with this proposal. List all course additions in progress in the table below. Add rows as needed.

No new courses are needed for the proposed minor

Subject description for new prefix (if requested). Include your requested/preferred prefix, if any:

II. Learning Outcomes - Complete this table as a summary of the learning outcomes from your assessment plan, using these examples as a model. If you need assistance completing this table and/or the Curriculum Map, please see the resources at the Office of Instruction and Assessment or contact them here.

Learning Outcome #1: Students will be able to differentiate the distinct roles insects play in human health, society and culture.
Concepts: Insects' role in nature and society
Competencies: Students will demonstrate critical analysis skills for roles insects play in nature and society.
Assessment Methods: For courses this outcome will be assessed in homework, exams, quizzes, assignments, papers or other student projects. For the Minor this outcome will be assessed directly in an assignment in Insect Biology (ENTO 415R) and indirectly through student survey at the end of the program.
Measures: For courses, instructor grading of homework, quizzes, assignments, exams, papers or other student projects. For the Minor student survey and assignments.
Learning Outcome #2: Students will be able to contrast and compare the diversity, life stages and ecology of major groups of insects.
Concepts: Insect diversity, insect life stages, insect ecology
Competencies: Students will be able to compare and contrast major groups of insects in terms of diversity, life stages, and ecology.
Assessment Methods: For courses this outcome will be assessed in homework, exams, quizzes, assignments, papers or other student projects. For the Minor this outcome will be assessed directly in an assignment in Insect Biology (ENTO 415R) and indirectly through student survey at the end of the program.
Measures: For courses, instructor grading of homework, quizzes, assignments, exams, papers or other student projects. For the Minor student survey and assignments.
Learning Outcome #3: Students will be able to extrapolate from insect model systems to ecosystems, agriculture and human health.
Concepts: insect model systems, ecosystems, agricultural systems, human health

Competencies: Students will be able to critically apply concepts from insect models to other fields.
Assessment Methods: For courses this outcome will be assessed in homework, exams, quizzes, assignments, papers or other student projects. For the Minor this outcome will be assessed directly in an assignment in Insect Biology (ENTO 415R) and indirectly through student survey at the end of the program.
Measures: For courses, instructor grading of homework, quizzes, assignments, exams, papers or other student projects. For the Minor student survey and assignments.

Individual course assessments

Course	Course title	Lecturer	Outcome 1	Outcome 2	Outcome 3
			Students will be able to differentiate the distinct roles of insects in human health, society and culture	Students will be able to contrast and compare the diversity, life stages and ecology of major groups of insects	Students will be able to extrapolate from insect model systems to ecosystems, agriculture and human health
ENTO 160D1	How Insects Shaped Human History	McKnight Schlenke	Exam, quiz, class discussion, paper, video presentation	Exam, quiz, class discussion	Exam, quiz, class discussion, assignment
ENTO 170C2	How Insects Conquered Earth	Matzkin Hunter McKnight	group quizzes, exam, written reports	group quizzes, natural history project, video project, exam, written report	
ENTO 415R	Insect Biology	Walker, Moore	in-class and homework essays, quizzes, exams, mini-labs with written or oral reports	insect collection, quizzes, mini-labs	in-class and Homework essays, quizzes, exams, Mini-labs
ENTO 300	Insect Pest Management for Desert Cropping	Palumbo		exams, quizzes, assignments	exams, quizzes, assignments
ENTO 401	Ecological Physiology	Davidowitz		review paper, discussion summaries, exams, assignments, quizzes	review paper, discussion summaries, exams, assignments, quizzes
ENTO 407	Insect Discovery	Walker	teaching observations, quizzes, final outreach design project	teaching observations, quizzes, research paper	

ENTO417	Insect Systematics	Moore	in-class and homework essays, quizzes, exams, mini- labs with written or oral reports	insect collection, quizzes, labs	
ENTO 432	Comparative Immunology	Schlenke			primary literature summaries, presentations, exams
ENTO 436	Agro Ecology	Carriere, Walker	review paper, class discussion summaries, exams, assignments, quizzes		review paper, class discussion summaries, exams, assignments, quizzes
ENTO 457	Medical-Veterinary Entomology	Riehle	exams, discussions, critical reading assignments		exams, discussions, critical reading assignments
ENTO 403R	Biology Animal Parasites	Cooper	participation quizzes, discussion, reading quizzes, exams		participation quizzes, discussion, reading quizzes, exams
ENTO 497C	Greenhouse Pest Management	Hooks		lecture, readings, assignments, observation in greenhouse, exams	lecture, readings, assignments, observation in greenhouse, exams
ENTO 405	Aquatic Entomology	Bogan		aquatic insect collection, class discussions, group activities in class, class research project on aquatic insect dispersal, in-class quizzes, readings of primary research papers	class discussions, group activities in class, class research project on aquatic insect dispersal, in-class quizzes, readings of primary research papers
ENTO 468	Integrated Pest Management	Li	exams, quizzes, assignments		exams, quizzes, assignments
ENTO 392	Directed Research	All	individual project	individual project	individual project
ENTO 492	Directed Research	All	individual project	individual project	individual project

ENTO 499	Independent Study	All	individual project	individual project	individual project
ENTO 499H	Honors Independent Study	All	individual project	individual project	individual project

University of Arizona AMS » Sandboxes
Ingrid Novodvorsky Playspace

Entomology Minor Curriculum Map

Courses and Activities Mapped to Entomology Certificate

	Outcome		
	Outcome 1 Students will be able to differentiate the distinct roles of insects in human health, society and culture.	Outcome 2 Students will be able to contrast and compare the diversity, life stages and ecology of major groups of insects.	Outcome 3 Students will be able to extrapolate from insect model systems to ecosystems, agriculture and human health.
Courses and Learning Activities			
ENTO 160D1 How Insects Shaped Human History	A	A	A
ENTO 170C2 How Insects Conquered Earth	A	A	
ENTO 415R Insect Biology	A	A	A
ENTO 300 Insect Pest Management for Desert Cropping		A	A
ENTO 401 Ecological Physiology		A	A
ENTO 407 Insect Discovery	A	A	
ENTO 417 Insect Systematics	A	A	
ENTO 432 Comparative Immunology			A
ENTO 436 Agro Ecology	A		A
ENTO 457 Medical-Veterinary Entomology	A		A
ENTO 403R Biology Animal Parasites	A		A
ENTO 497C Greenhouse Pest Management		A	A
ENTO 405 Aquatic Entomology		A	A
ENTO 468 Integrated Pest Management	A		A
Research ENTO 392/399/499/499H	A	A	A
Program Assessment Activities			
Insect Biology Direct Measure	A	A	A
Survey Student Survey (Indirect)	A	A	A

Legend : I Introduced | P Practiced | A Assessed | I/P Introduced/Prac

Last Modified: 04/29/2022 01:18:55 PM

III. REQUIRED SIGNATURES

Program Director/Main Proposer (print name and title):
Goggy Davidowitz, Professor and University Distinguished Scholar

Program Director/Main Proposer signature:
Date: 22 March 2022

Goggy Davidowitz

Department Head (print name and title):
Bruce Tabashnik, Professor

Department Head's signature:
Date: 3-22-22

Associate/Assistant Dean (print name): Michael Staten

Associate/Assistant Dean's signature:
Date: 5/2/22

Dean (print name): Shane Burgess

Dean's signature:
Date:

For use by Curricular Affairs:

Undergraduate:

Committee	Approval date
APS	
Undergraduate Council	
Undergraduate College Academic Administrators Council	
Faculty Senate	

Undergraduate:

Committee	Approval date
APS	
Undergraduate Council	
Undergraduate College Academic Administrators Council	
Faculty Senate	

THE UNIVERSITY OF ARIZONA

BUDGET PROJECTION FORM

Name of Proposed Program or Unit: Entomology

Budget Contact Person:	Projected		
	1st Year 2023 - 2024	2nd Year 2024- 2025	3rd Year 2025- 2026
METRICS			
Net increase in annual college enrollment UG	6	10	15
Net increase in college SCH UG	108	180	270
Net increase in annual college enrollment Grad			
Net increase in college SCH Grad			
Number of enrollments being charged a Program Fee	-	-	-
New Sponsored Activity (MTDC)			
Number of Faculty FTE			
FUNDING SOURCES			
Continuing Sources			
UG AIB Revenue	21,600	36,000	54,000
Grad AIB Revenue	-		
Program Fee Revenue (net of revenue sharing)	-		
F and A AIB Revenues	-		
Reallocation from existing College funds (attach description)	-		
Other Items (attach description)	-		
Total Continuing	$ 21,600	$ 36,000	$ 54,000
One-time Sources			
College fund balances	-		
Institutional Strategic Investment	-		
Gift Funding	-		
Other Items (attach description)	-		
Total One-time	$ -	$ -	$ -
TOTAL SOURCES	$ 21,600	$ 36,000	$ 54,000
EXPENDITURE ITEMS			
Continuing Expenditures			
Faculty			
Other Personnel	151	156	161
Employee Related Expense	47	48	50
Graduate Assistantships			
Other Graduate Aid			
Operations (materials, supplies, phones, etc.)			
Additional Space Cost			
Other Items (attach description)			
Total Continuing	$ 198	$ 204	$ 210
One-time Expenditures			
Construction or Renovation	-	-	-
Start-up Equipment			
Replace Equipment			
Library Resources			
Other Items (attach description)			
Total One-time	$ -	$ -	$ -
TOTAL EXPENDITURES	$ 198	$ 204	$ 210
Net Projected Fiscal Effect	$ 21,402	$ 35,796	$ 53,790

THE UNIVERSITY OF ARIZONA

New Academic Program
PEER COMPARISON

Select three peers (if possible/applicable) for completing the comparison chart from ABOR-approved institutions, AAU members, and/or other relevant institutions recognized in the field. The comparison programs are not required to have the same degree type and/or title as the proposed UA program. Information for the proposed UA program must be consistent throughout the proposal documents. Minors and Certificates may opt to include only 2 peer comparisons.

Program name, degree, and institution	Minor in Entomology	Michigan State University, Minor in Entomology	Purdue University, Minor in Entomology
Current number of students enrolled	[redacted]	14	15
Program Description	Insects make up most multicellular life on earth. They cause harm by vectoring diseases, attacking crops, and damaging buildings. Insects also provide critical services such as pollination and are superb models for studying biological organization. They can even help us understand how the planet responds to climate change and how we can boost sustainability and reduce our carbon footprint. Students can tailor a Minor in Entomology to their own interests. The focus could include insect pest management, public health or medical entomology, and outreach, as well as insect genomics, conservation, education, systematics, behavior, ecology, physiology, and	Students from any major at MSU are welcome to add a minor in Entomology. It is designed to serve students in other fields who want additional training in insect sciences. This minor provides an introduction to a range of entomological knowledge, including insect identification, ecology and management.	Taken from Insect Biology Major: The insect biology (formerly entomology) major is a general curriculum in insect science that will prepare you for a professional career in many areas. You will take courses focusing on insect structure and function, behavior, ecology, and diversity and identification, as well as obtain a strong background in math, science, and the humanities.

	evolution. The minor is offered through the Department of Entomology, one of the highest ranked departments in this discipline in the U.S., with a wealth of expertise in both basic and applied fields.		
Target Careers	Insect pest management, public health or medical entomology, as well as insect genomics conservation, education, systematics, behavior, ecology, physiology, and evolution.	Conservation leaders, Government advisors in bio-security, food security, Museum curators and educators, Invasive species inspectors, Pest control managers.	Research, Public health, Medical entomology, Teaching, Environmental avenues
Minimum # of units required	18	15	15
Special requirements to declare/gain admission? (i.e. pre-requisites, GPA, application, etc.)	Minimum cumulative GPA of 2.0	Fundamentals in Entomology (ENT 404)	General Entomology (ENTM 20600) General Entomology Laboratory (ENTM 20700)
Internship, practicum, or applied/experiential requirements? If yes, describe.	Required: Students must acquire three credits from at least one of the following options: Directed Research (ENTO 392, 492) Independent Study (ENTO 299, 299H, 399,499, 499H) Honors Thesis (ENTO 498H) Senior Capstone (ENTO 498) Internship (ENTO 393, 493) Preceptorship (ENTO 391, 391H, 491, 491H) Insect Discovery (ENTO 407)	none	none

Additional questions:

1. How does the proposed program align with peer programs? Briefly summarize the similarities between the proposed program and peers, which could include curriculum, overall themes, faculty expertise, intended audience, etc.

   The proposed Minor in Entomology aligns well with peer programs. All require a basic course in entomology and a group of electives. There is overlap among the peer groups, as well as difference, largely based on faculty expertise.

2. How does the proposed program stand out or differ from peer programs? Briefly summarize the differences between the proposed program and peers, which could include curriculum, overall themes, faculty expertise, intended audience, etc.

   The peer programs are in entomology departments that also have a major in entomology. Their minors are targeted to non-entomology students that want more knowledge in the field. The UA does not have a major in entomology, thus, our target audience are undergraduates that are interested in developing their knowledge in entomology, that do not have the option of a major. Our program requires 18 credits, compared to 15 in peer programs. In addition, we require three units of hands on experience in research or education experience. The UA has the only entomology department in AZ. It has ranked consistently among the top five in the country by Academic Analytics and has been in the #1 or #2 spot numerous times over the past few years.

3. How do these differences make this program more applicable to the target student population and/or a better fit for the University of Arizona?

   The proposed minor is a good fit for the UA, which does not have a major in entomology. In 2020, at the request of Dean of CALS, we conducted market research to examine the feasibility of a major in entomology. The conclusion was that a major would not be financially feasible, given we would have to create a significant number of new faculty lines. This minor builds on existing faculty and does not require new faculty lines. Our proposed minor has additional requirements beyond that of peer institutions, such as more required units and required hands-on experience. Every year we are asked by students in the Insect Biology (ENTO 415R) course, as well as others, about a minor or major in entomology. This proposed minor will fill that student interest in further expanding their knowledge in entomology and insect science. The UA is the only university in AZ with a department of entomology. As such, only UA can provide the scope of expertise needed for a minor in entomology.

THE UNIVERSITY OF ARIZONA

SCHOOL OF ANIMAL AND COMPARATIVE BIOMEDICAL SCIENCES
COLLEGE OF AGRICULTURE AND LIFE SCIENCES
1117 E. Lowell Street
P.O. Box 210090
Tucson, AZ 85721-0090

Tel: 520-621-2355
Fax: 520-626-5602

https://acbs.arizona.edu/

March 28, 2022

Professor Goggy Davidowitz
Department of Entomology
University of Arizona

Dear Professor Davidowitz,

In response to your request, I am hereby granting permission for you to include our course Biology of Animal Parasites (ACBS 403R), currently cross listed as ENTO 403R, as part of your proposed Entomology minor. This course is offered regularly on an annual basis, and there are seats available to accommodate Entomology minor students.

Best regards,

H. Dieter Steklis, Ph.D.
Interim Director, SACBS

THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE & LIFE SCIENCES
Natural Resources
& the Environment

Office of the Director
ENR-2 – Room N333
1064 Lowell Street
Tucson, AZ 85721
Telephone: (520) 626-5895
Fax (520) 621-8801
http://snre.arizona.edu/

Date: March 29, 2022

To: Prof. Goggy Davidowitz, Department of Entomology

From: Prof. Willem van Leeuwen, Interim Director, School of Natural Resources and the Environment (SNRE), College of Agriculture and Life Sciences

Subject: Permission to include Aquatic Entomology RNR/ENTO405 in the Entomology minor

The undersigned, Wim van Leeuwen, and the current instructor, Dr. Michael Bogan, support and give permission to include the Aquatic Entomology (ENTO 405) course in the Entomology minor program. SNRE has regular offerings of this course and has seats available to facilitate this minor in Entomology.

Interim Director SNRE
Prof. Dr. Ir. Willem J.D. van Leeuwen
leeuw@arizona.edu

THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE & LIFE SCIENCES
COLLEGE OF ENGINEERING
Biosystems Engineering

Shantz, Room 403
1177 E 4th Street
PO Box 210038
Tucson, AZ 85721-0038

Tel: 520-621-3691
Fax: 520-621-3963

http://be.arizona.edu

March 29, 2022

Dr. Goggy Davidowitz
Professor and University Distinguished Scholar
Department of Entomology

Dear Dr. Davidowitz,

Thank you for your message concerning the development of a new College of Agriculture and Life Sciences minor in Entomology. As a home department for one of the courses included in the initial curriculum listing for the minor (BE/ENTO 479C), this letter serves to confirm our support for this new curriculum opportunity in the College. Further, the course involved in the minor is regularly offered as part of our existing curriculum and seats are available in this course.

Sincerely,

K. L. Farrell-Poe

Kathryn L. Farrell-Poe
Head, Specialist, and Professor

From: **Marchello, Elaine V - (evm)** evm@arizona.edu
Subject: RE: Entomology Minor Map
Date: May 2, 2022 at 1:23 PM
To: Davidowitz, Goggy - (goggy) goggy@arizona.edu

Goggy,
I think this is good. Good luck getting it approved!

Elaine

Elaine Marchello, Ph.D.
Assistant Director, Assessment
University of Arizona
Office of Instruction and Assessment
Integrated Learning Center Bldg 70
Room 105A
Tucson, AZ 85721
(520) 621-1328

From: Davidowitz, Goggy - (goggy) <goggy@arizona.edu>
Sent: Friday, April 29, 2022 3:27 PM
To: Marchello, Elaine V - (evm) <evm@arizona.edu>
Cc: Davidowitz, Goggy - (goggy) <goggy@arizona.edu>
Subject: Re: Entomology Minor Map

Hi Elaine,
Attached is the whole application with revisions based on our meeting. Can you check to see if this is ok?
Many thanks
Goggy

Goggy Davidowitz
Professor and University Distinguished Scholar
Department of Entomology
University of Arizona
goggy@email.arizona.edu
voice: 520-626-8455
http://goggy.faculty.arizona.edu