### UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN SENATE

### Monday, December 9, 2019 3:10 – 5:15 pm Illini Union – Illini Room A **Agenda**

- I. CALL TO ORDER Andreas Cangellaris, Vice Chancellor for Academic Affairs & Provost
- II. APPROVAL OF MINUTES November 11, 2019
- III. PUBLIC COMMENT
- IV. SENATE EXECUTIVE COMMITTEE CHAIR REMARKS Rob Kar, SEC Chair
- V. CHANCELLOR'S REMARKS Andreas Cangellaris, Vice Chancellor for Academic Affairs & Provost
- **VI. QUESTIONS** (senators only)

### VII. CONSENT AGENDA

VIII.

### Consent Agenda items distributed online only at https://www.senate.illinois.edu/20191209a.asp

EP.20.29	Establish an Undergraduate Minor In Legal Studies	Educational Policy E. Meyer, Chair
EP.20.36	Revising Concentrations within Germanic Studies	Educational Policy E. Meyer, Chair
EP.20.37	Revise Requirements for the German Business and Commercial Studies Concentration	Educational Policy E. Meyer, Chair
EP.20.38	Revise Concentration Name to German Studies and Revise Requirements	Educational Policy E. Meyer, Chair
EP.20.39	Eliminate the German Linguistics Concentration	Educational Policy E. Meyer, Chair
EP.20.40	Revise the Scandinavian Studies Concentration Requirements	Educational Policy E. Meyer, Chair
EP.20.41	Establish Joint Program in the Department of Crop Sciences for the BS of Computer Science + Crop Sciences and MS in Crop Sciences	Educational Policy E. Meyer, Chair
PROPOSALS (	enclosed)	
CC.20.15	Election of Members on Standing Committees of the Senate and Other Bodies with Senate Representation	Committee on Committees <i>C. Span, Chair</i>
HD.20.06	Nominations for Honorary Degree Awards	Honorary Degrees

3

M. Wheeler, Chair

1

SP.20.09	Proposed Revision to the <i>Constitution</i> , Article II, Section 1.b; Article III, Section 1; and Article IV, Section 1 (First Reading; Information)	University Statutes & Senate Procedures S. Gilmore, Chair	13
SP.20.10	Revision to the <i>Bylaws</i> , Part C – Elections	University Statutes & Senate Procedures <i>S. Gilmore, Chair</i>	15
SP.20.14	Revision to the <i>Bylaws</i> , Part D.6 – Committee on Committee	University Statutes & Senate Procedures <i>S. Gilmore, Chair</i>	17
Reports			
EP.20.42	Administrative Approvals through November 12, 2019	Educational Policy E. Meyer, Chair	19
SC.20.08	Report on the November 14, 2019 Meeting of the Board of Trustees of the University of Illinois System	N. Burbules	97

X. New Business

IX.

XI. ADJOURNMENT

### UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN SENATE MONDAY, NOVEMBER 11, 2019 ILLINI UNION – ILLINI ROOM A MINUTES

### I. CALL TO ORDER

A regular meeting of the University of Illinois Urbana-Champaign Senate was called to order at 3:10 pm with Vice Chancellor for Academic Affairs and Provost Andreas Cangellaris presiding and Professor Emeritus H. George Friedman, Jr. serving as Parliamentarian.

### II. APPROVAL OF MINUTES

11/11/19-01 The minutes of the October 14, 2019 meeting were approved as distributed.

### III. PUBLIC COMMENT

No requests received.

### IV. SENATE EXECUTIVE COMMITTEE CHAIR'S REMARKS

Professor Rob Kar (LAW), a faculty senator and Chair of the Senate Executive Committee (SEC), reported that the Vice Chancellors will give presentations at the next several SEC meetings to inform the SEC about their annual goals. The Faculty Sexual Misconduct Report and Recommendations was published. The recommendations will hopefully make Illinois a leader in the nation on better ways to respond to sexual misconduct. There is a resolution supporting the Report on today's agenda.

### V. CHANCELLOR'S REMARKS

Provost Cangellaris gave remarks in the Chancellor's absence. The Chancellor is attending the Association of Public and Land-grant Institutions (APLU) meeting and assuming the position of chair of the APLU. Cangellaris recognized Veteran's Day and thanked those that help to protect our freedoms.

The Faculty Sexual Misconduct Report and Recommendations has been published and many groups are being consulted in the implementation plans. Cangellaris thanked the chair of the Faculty Sexual Misconduct committee, Rob Kar, for his and the committee's hard work in developing the report and recommendations. The Committee stayed in contact with the system level committee. A separate committee is developing policy recommendations on consensual relationships and will publish their report soon. To be successful, we need to create a framework that has policies and procedures that create a campus climate intolerant of sexual misconduct.

President Killeen recently sent an email message announcing three new guiding principles for a total of six guiding principles; Freedom of Speech on Campus, Globalization and Immigration, Civic Engagement, Excellence with Integrity, Fostering Healthy Relationships Across the Campuses, and Financial and Environmental Sustainability. The system website has additional information on each guiding principle. The Celebration Women Faculty at Illinois is an annual event sponsored in part by the Office of the Provost. The event recognizes women faculty at Illinois who have recently been promoted and/or tenured; honored as named professors or chairs; named University Scholars; and elected to national academies. We are making good progress in increasing the size of the women faculty, but there is still more room to grow.

The Student Success Initiative strives to increase access, promote timely degree completion, and prepare our students to make positive contributions to the state, nation, and the world. Part of our goal is to provide transformative learning experiences for our students with areas of focus on academic support, co-curricular activities, firstyear experience, and foundational courses. Working groups will consider opportunities to improve and expand efforts to help students achieve a degree at Illinois.

Cangellaris recognized the Illini football team for their fourth consecutive victory and congratulated our student athletes.

VI. C	UESTIONS
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Student senator Bambenek (GRAD) expressed his concern about reporters that are also employees of the University of Illinois and therefore considered mandatory reporters. Cangellaris replied that this issue is being considered at the system level by President Killeen.

VII.	<b>CONSENT AGENDA</b>
	Hearing no objections, the following items were approved by unanimous consent.
11/11/19-02	<u>EP.20.01</u> * Establish a Master of Veterinary Science (MVS) Degree
11/11/19-03	EP.20.03* Establish a Major in Livestock Systems Health, Master of Veterinary Science
11/11/19-04	<u>EP.20.04</u> * Establish a New Graduate-level Concentration Titled "Data Analytics in Finance" in the Department of Finance in the Gies College of Business
11/11/19-05	<u>EP.20.11</u> * Revise the Computer Science + Crop Sciences Major for the Bachelor of Science Degree, in the Department of Crop Sciences, College of ACES, and the Department of Computer Science, College of Engineering

11/11/19-06 EP.20.19\* Establish Joint Program in the Department of Crop Sciences for BS/MS

- 11/11/19-07 <u>EP.20.22</u>\* Proposal to rename the Illinois Program for Research in the Humanities and establish the "Humanities Research Institute" as a permanent institute
- 11/11/19-08 EP.20.23\* Revision of the Speech and Hearing Science (SHS) Undergraduate Major

Senate Minutes 11/11/2019 Page 2 of 6

11/11/19-09	<u>EP.20.24</u> * Establishing a 5-year BS/MS option in the Department of Recreation, Sport and Tourism (RST)
11/11/19-10	EP.20.25* Establish a Master of Public Health in Epidemiology Major
11/11/19-11	<u>EP.20.26</u> * Proposal to Rescind the Restructuring of College of Veterinary Medicine PhD Programs into a Single Doctoral Program Named "Comparative Biomedical Sciences" and to Continue the Existing PhD programs in Comparative Biosciences and Pathobiology
11/11/19-12	EP.20.27* Proposal to Continue the Existing PhD Programs in Comparative Biosciences
11/11/19-13	EP.20.28* Proposal to Continue the Existing PhD Programs in Pathobiology
11/11/19-14	<u>EP.20.30</u> * Revision of the Speech and Hearing Science (SHS) Undergraduate Major and Concentrations, BS (Neuroscience)
11/11/19-15	<u>EP.20.31</u> * Revision of the Speech and Hearing Science (SHS) Undergraduate Major and Concentrations, BS (Audiology)
11/11/19-16	<u>EP.20.32</u> * Revision of the Speech and Hearing Science (SHS) Undergraduate Major and Concentrations, BS (Language Pathology)
11/11/19-17	<u>EP.20.33</u> * Revision of the Speech and Hearing Science (SHS) Undergraduate Major and Concentrations (Cultural-Linguistic Diversity)
<b>VIII.</b> 11/11/19-18	<b>PROPOSALS</b> <u>CC.20.10</u> * Student Nominations to the Joint Committee on Investment, Licensing, and Naming Rights
	On behalf of the Senate Committee on Committees (CC), Chair Span introduced and moved approval of the slate of nominees in proposal CC.20.09. There were no nominations from the floor and nominations were declared closed.
11/11/19-19	By i-clicker and show of hands, the slate of nominees listed in CC.20.10 were approved with 100 in favor, 0 opposed, and 3 abstention. The names of the nominees will be forwarded to the Chancellor for selection of three student members to serve.
11/11/19-20	<u>CC.20.14</u> * Election of Members on Standing Committees of the Senate
	On behalf of CC, Chair Span introduced and moved approval of the slate of nominees in proposal CC.20.14 with the addition of Rebecca Maree (GRAD) to the Senate Committee on the Library. There were no nominations from the floor and nominations were declared closed.
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Senate Minutes 11/11/2019 Page 3 of 6

- 11/11/19-21 By i-clicker and show of hands, the slate of nominees presented in proposal CC.20.14 were elected with 115 in favor, 0 opposed, and 3 abstention.
- 11/11/19-22 <u>EC.19.05</u>\* Revision to the *Election Rules for the Faculty Electorate* Article 6. General Election Provisions

On behalf of the Senate Committee on Elections and Credentials (EC), Chair Graber introduced and moved approval of proposal EC.19.05. No discussion.

- 11/11/19-23 By i-clicker and show of hands, proposal EC.19.05 was approved with 115 in favor, 0 opposed, and 2 abstentions.
- 11/11/19-24 <u>SC.20.06</u>\* Resolution to Support Implementation of the Report and Recommendations on Faculty Sexual Misconduct

On behalf of the SEC, Chair Kar introduced and moved approval of resolution SC.20.06. Kar noted that members of the Office of the Provost created an informal task force that is beginning to work on implementation of some recommendations. Chair of the Senate Committee on University Statutes and Senate Procedures (SP), Gilmore added that some of the recommendations would require amendments to the *Statutes* and those amendments require agreement of all three universities.

- 11/11/19-25 By i-clicker and show of hands, proposal SC.20.06 was approved with 113 in favor, 1 opposed, and 5 abstentions. Chair Kar abstained from the vote.
- 11/11/19-26 <u>RS.20.01</u>\* Resolution to Produce Information on Sexual Harassment Cases

Student senator Bambenek (GRAD) introduced and moved approval of resolution RS.20.01 noting that this was the new business he introduced at the September 16, 2019 Senate meeting. The motion was seconded and discussion followed.

- 11/11/19-27 Due to the burden of manually compiling the requested information, faculty senator Rosenstock (LAS) made a motion to substitute "Such a report should be produced in a timely manner" for the existing #10 "Such a report should be produced in time for review by the Senate meeting held on December 9, 2019." The motion was seconded and discussion followed.
- 11/11/19-28 A motion was made to amend the amendment by substituting "Such a report should be produced in time for review by the Senate meeting on April 27, 2020." For the previous motion of "Such a report should be produced in a timely manner". The motion was seconded and discussion followed.

- 11/11/19-29 By i-clicker and show of hands, the motion to amend the amendment was approved with 106 in favor, 7 opposed, and 7 abstentions.
- 11/11/19-30 By i-clicker and show of hands, the motion to approve the amended amendment was approved with 102 in favor, 9 opposed, and 4 abstentions.
- 11/11/19-31 After further discussion, a motion was made to amend the motion by substituting "Such a report should be produced in a timely manner, but no later than the Senate meeting on April 27, 2020." for the previous language "Such a report should be produced in time for review by the Senate meeting on April 27, 2020". The motion was seconded and discussion followed.
- 11/11/19-32 By i-clicker and show of hands, the amendment to the motion was approved with 108 in favor, 4 opposed, and 6 abstentions.
- 11/11/19-33 By i-clicker and show of hands, proposal RS.20.01 was approved as amended with 109 in favor, 4 opposed, and 5 abstentions.
- 11/11/19-34 SP.20.02\* Revision to the Standing Rules 2, 3, 5, 9, 10, 12, 14, and 16

On behalf of SP, Chair Gilmore introduced and moved approval of proposal SP.20.02. Bambenek expressed his concern that #5 may not be fully compliant with the Illinois Open Meetings Act (OMA).

- 11/11/19-35 By i-clicker and show of hands, proposal SP.20.02 was approved with 110 in favor, 0 opposed, and 2 abstentions.
- 11/11/19-36 <u>SP.20.03</u>\* Revision to the *Bylaws,* Part D.1 Senate Executive Committee and *Standing Rule* 11 – Election of a Senate Executive Committee Member from the Committee on the University Senates Conference

On behalf of SP, Chair Gilmore introduced and moved approval of proposal SP.20.03. No discussion.

- 11/11/19-37 By i-clicker and show of hands, proposal SP.20.03 was approved with 113 in favor, 0 opposed, and 1 abstentions. The required two-thirds was achieved.
- 11/11/19-38 <u>SP.20.04</u>\* Revision to the *Standing Rules* Setting Time Limits for Introduction and Discussion of Senate Items

On behalf of SP, Chair Gilmore introduced and moved approval of proposal SP.20.04. Gilmore noted that this rule requires a two-third vote to approve and for any future amendments since it limits debate.

Senate Minutes 11/11/2019 Page 5 of 6

- 11/11/19-39 Faculty senator Maher (LIBR) made a motion to substitute five minutes instead of three minutes for introduction of an item. Motion was seconded and discussion followed.
- 11/11/19-40 By i-clicker and show of hands, the motion to amend by substituting five minutes instead of three for introduction of an item was approved with 94 in favor, 19 opposed, and 4 abstentions. Debate on the main motion continued.
- 11/11/19-41 Chair Kar made a motion to amend line 12 by adding "per speaking instance" after the phrase "per speaker". The motion was seconded and discussion continued.
- 11/11/19-42 Chair Kar made a motion to close debate. The motion was seconded and a vote was immediately taken.
- 11/11/19-43 By i-clicker and show of hands, debate was closed with 92 in favor, 8 opposed, and 4 abstentions.
- 11/11/19-44 By i-clicker and show of hands, the motion to add "per speaking instance" on line 12 was approved with 95 in favor, 4 opposed, and 4 abstentions.
- 11/11/19-45 By i-clicker and show of hands, proposal SP.20.04 was approved as amended with 72 in favor, 23 opposed, and 9 abstentions. The required two-thirds was achieved.
  - IX. MY-UI- FINANCIALS: YOUR FINANCIAL INFORMATION ANYTIME ANYWHERE Brent Rasmus, Assistant Vice President and Controller, University of Illinois System, and Jason Bane, Sr. Business & Financial Coordinator, University Accounting & Financial Reporting, presented information about the online My-UI-Financials system.
  - X. New Business No new business.

### XI. ADJOURNMENT

The meeting was adjourned at 4:55 pm.

Jenny Roether, Senate Clerk \*Filed with the Senate Clerk and incorporated by reference in these minutes. A video recording of these proceedings can be found at https://go.illinois.edu/senate.

LAST	FIRST	TITLE	COLLEGE	UNIT	SEAT	TERM	11/11/19
Lemoine	Craig	Clinical Assistant Professor	ACES	Agricultural and Consumer Economics	01-1	2021	Α
Arends-Kuennin	Mary	Associate Professor	ACES	Agricultural and Consumer Economics	01-2	2020	E
Xu	Yilan	Assistant Professor	ACES	Agricultural and Consumer Economics	01-3	2021	Х
Grift	Tony	Associate Professor	ACES	Agricultural and Biological Engineering	02-1	2021	E
Gates	Richard	Professor	ACES	Agricultural and Biological Engineering	02-2	2020	E
Christianson	Laura	Assistant Professor	ACES	Crop Sciences	03-1	2021	E
Branham	Bruce	Professor	ACES	Crop Sciences	03-3	2020	Α
Lipka	Alex	Assistant Professor	ACES	Crop Sciences	03-4	2020	Α
Gaskins	H Rex	Professor	ACES	Animal Sciences	04-1	2021	A
Fischer-Brown	Amy	Teaching Associate Professor	ACES	Animal Sciences	04-2	2020	Х
Miller	David	Professor	ACES	Animal Sciences	04-3	2020	E
Кпох	Robert	Professor	ACES	Animal Sciences	04-4	2021	X
Keating	Kari	Teaching Assistant Professor	ACES	Human Development and Family Studies	05-1	2020	E
Smith	Shardé	Assistant Professor	ACES	Human Development and Family Studies	05-2	2021	E
Bohn	Dawn	Teaching Assistant Professor	ACES	Food Science and Human Nutrition	06-1	2021	E
Lee	Soo-Yeun	Professor	ACES	Food Science and Human Nutrition	06-2	2021	A
Takhar	Pawan	Professor	ACES	Food Science and Human Nutrition	06-3	2020	X
McSweeney	Kevin	Associate Professor	ACES	Natural Resources and Environmental Sciences	07-1	2020	E
	Michelle	Professor					
Wander			ACES	Natural Resources and Environmental Sciences	07-2	2020	E
Welch	Gabriella	Student	ACES	Student	A-01	2020	X
Herman	Mark	Student	ACES	Student	A-02	2020	X
Navickis	Alec	Student	ACES	Student	A-03	2020	X
Chiu	Chung-Yi	Assistant Professor	AHS	Kinesiology and Community Health	01-1	2020	E
Gothe	Neha	Assistant Professor	AHS	Kinesiology and Community Health	01-2	2021	X
Graber	Kim	Professor	AHS	Kinesiology and Community Health	01-3	2020	Х
	VACANT		AHS	Recreation Sport and Tourism	02-1	2020	
	VACANT		AHS	Recreation Sport and Tourism	02-2	2021	
Chambers	Ronny	Associate Professor	AHS	Speech and Hearing Science	03-1	2020	Х
Monson	Brian	Assistant Professor	AHS	Speech and Hearing Science	03-2	2021	Х
Ahmed	Eleena	Student	AHS	Student	A-01	2020	A
Sears	Shelby	Student	AHS	Student	A-02	2020	Х
Garner	Jenny	County Director, Ext. Unit 7	AP	District 6	01-1	2020	E
Ruud	Collin	Data Scientist	AP	District 8	01-2	2020	E
Helgesen	Molly	Academic Advisor	AP	District 2	01-3	2020	E
Harris	Kelli	Head Teacher	AP	District 5	01-4	2021	Х
Davis	Mark	Conservation Biologist	AP	District 11	01-5	2021	Х
Godwin	Aaron	Academic Advisor	AP	District 3	01-6	2021	Α
Christensen	Sarah	Visual Research & Outreach Specialist	AP	District 9	01-7	2020	E
Lu	Qiyue	Research Scientist	AP	District 4	01-8	2020	Х
Farber	Brian	Exec. Asst. to Assoc. VC Student Affairs	AP	District 7	01-9	2020	Х
Bievenue	Lisa	Assistant Director	AP	District 10	01-10	2020	Х
Нерр	John	Clinical Assistant Professor	BUS	Accountancy	01-1	2020	Х
Penn	Michael	Senior Lecturer	BUS	Accountancy	01-2	2021	Х
Hutchens	Matthew	Lecturer	BUS	Accountancy	01-3	2020	Х
Silhan	Peter	Associate Professor	BUS	Accountancy	01-4	2021	х
Sougiannis	Theodore	Professor	BUS	Accountancy	01-5	2020	х
Peters	Stephen	Lecturer	BUS	Finance	02-1	2021	Х
DeBrock	Larry	Professor	BUS	Finance	02-2	2020	Α
Marcinkowski	Matthew	Lecturer	BUS	Finance	02-3	2021	X
Widdicks	Martin	Senior Lecturer	BUS	Finance	02-4	2020	A
Noel	Hayden	Clinical Assistant Professor	BUS	Business Administration	03-1	2021	E
Liu	•	Associate Professor	BUS	Business Administration	03-2	2021	X
Kindt	John	Professor Emeritus	BUS	Business Administration	03-3	2021	X
Michael	Steve	Professor	BUS	Business Administration	03-4	2020	A
Venkatasubrama		Clinical Assistant Professor	BUS	Business Administration	03-4	2020	X
Wright	Margaret	Clinical Assistant Professor	BUS	Business Administration	03-5	2021	E
Lopez	Josue	Student	BUS	Student - Accountancy/Finance	A-01	2020	A
Moolayil	Nishant	Student	BUS	Student - Accountancy/Finance	A-01 A-02	2020	A
				· ·			
Raquel	Kayt Hilony	Student	BUS	Student - Business Admin/Undeclared	B-01	2020	X
Pham Marshall	Hilary	Student	BUS	Student - Business Admin/Undeclared	B-02	2020	E
	Jack	Student	DGS	Student	A-01	2020	A
-	Keiran	Student	DGS	Student	A-02	2020	A
Gregory	Vada	Student	DGS	Student	A-03	2020	Х
Burbules	Nicholas	Professor	EDUC	Education Policy Organization Leadership	01-1	2020	A

LAST	FIRST	TITLE	COLLEGE	UNIT	SEAT	TERM	11/11/19
Span	Christopher	Associate Professor	EDUC	Education Policy Organization Leadership	01-2	2020	X
	VACANT		EDUC	Education Policy Organization Leadership	01-3	2021	
Cromley	Jennifer	Associate Professor	EDUC	Educational Psychology	02-1	2021	X
lund-Wantland	Anita	Teaching Assistant Professor	EDUC	Educational Psychology	02-2	2020	A
lug	Barbara	Teaching Associate Professor	EDUC	Curriculum and Instruction	03-1	2020	E
Noller	Karla	Associate Professor	EDUC	Curriculum and Instruction	03-2	2021	E
Shriner	Jim	Associate Professor	EDUC	Special Education	04-1	2020	E
Rotter	Michael	Student	EDUC	Student	A-01	2020	Α
Hilton	Harry	Professor Emeritus	ENGR	Aerospace Engineering	01-1	2020	E
Prussing	John	Professor Emeritus	ENGR	Aerospace Engineering	01-2	2021	A
Goodman	Matthew	Lecturer	ENGR	Materials Science and Engineering	02-1	2021	E
	VACANT		ENGR	Materials Science and Engineering	02-2	2020	
Al-Qadi	Imad L	Professor	ENGR	Civil and Environmental Engineering	03-1	2020	Х
ange	David	Professor	ENGR	Civil and Environmental Engineering	03-2	2020	Х
Barkan	Christopher	Professor	ENGR	Civil and Environmental Engineering	03-3	2021	E
itark	Timothy	Professor	ENGR	Civil and Environmental Engineering	03-4	2021	A
Benekohal	Rahim	Professor	ENGR	Civil and Environmental Engineering	03-5	2020	X
orsyth	David	Professor	ENGR	Computer Science	03-3	2020	X
agen-Ulmschne		Teaching Assistant Professor	ENGR	Computer Science	04-2	2021	X
Varnow	Tandy	Professor	ENGR	Computer Science	04-2	2021	E
Challen	Geoffrey	Teaching Associate Professor	ENGR	Computer Science	04-3	2020	X
Zilles	Craig	Associate Professor	ENGR	Computer Science	04-4	2021	X
Marinov	Darko	Professor	ENGR	Computer Science	04-5	2020	E
Campbell		Professor	ENGR		04-0	2020	X
	Roy Xu	1	ENGR	Computer Science	04-7	2020	E A
Chen Dallesasse	John	Teaching Assistant Professor Professor	ENGR	Electrical and Computer Engineering	05-1	2021	X
				Electrical and Computer Engineering			
Bross	George	Professor	ENGR	Electrical and Computer Engineering	05-3	2021	X
laran	Kiruba	Associate Professor	ENGR	Electrical and Computer Engineering	05-4	2020	X
yer	Ravishankar	Professor	ENGR	Electrical and Computer Engineering	05-5	2020	E
liflet	Arne	Lecturer	ENGR	Electrical and Computer Engineering	05-6	2020	A
3howmik	Ujjal	Teaching Assistant Professor	ENGR	Electrical and Computer Engineering	05-7	2020	A
iang	Jing	Lecturer	ENGR	Electrical and Computer Engineering	05-8	2020	Х
Dragic	Peter	Assistant Professor	ENGR	Electrical and Computer Engineering	05-9	2021	X
Wang	Qiong	Associate Professor	ENGR	Industrial and Enterprise Systems Engineering	06-1	2021	E
Reis	Henrique	Professor	ENGR	Industrial and Enterprise Systems Engineering	06-2	2020	A
Sreenivas	RS	Associate Professor	ENGR	Industrial and Enterprise Systems Engineering	06-3	2021	E
Ertekin	Elif	Associate Professor	ENGR	Mechanical Science and Engineering	07-1	2021	Х
Ewoldt	Randy	Associate Professor	ENGR	Mechanical Science and Engineering	07-2	2020	A
Nam	SungWoo	Associate Professor	ENGR	Mechanical Science and Engineering	07-3	2020	Х
Sinha	Sanjiv	Associate Professor	ENGR	Mechanical Science and Engineering	07-4	2021	Х
Smith	Kyle	Assistant Professor	ENGR	Mechanical Science and Engineering	07-5	2021	E
Sofronis	Petros	Professor	ENGR	Mechanical Science and Engineering	07-6	2021	E
Di Fulvio	Angela	Assistant Professor	ENGR	Nuclear, Plasma and Radiological Engineering	08-1	2021	Х
Villenbrock	Scott	Professor	ENGR	Physics	09-1	2021	Х
Gollin	George	Professor	ENGR	Physics	09-2	2020	Х
looberman	Benjamin	Assistant Professor	ENGR	Physics	09-3	2021	Α
chulte	Elaine	Instructor	ENGR	Physics	09-4	2021	Х
lughes	Taylor	Assistant Professor	ENGR	Physics	09-5	2020	E
Jnderhill	Gregory	Assistant Professor	ENGR	Bioengineering	10-1	2021	E
ensen	Karin	Teaching Assistant Professor	ENGR	Bioengineering	10-2	2020	E
Sebastian	Nikhil	Student	ENGR	Student - ECE/CS/Undeclared	A-01	2020	E
Arun	Nikhil	Student	ENGR	Student - ECE/CS/Undeclared	A-02	2020	A
Bainbridge	Cody	Student	ENGR	Student - ECE/CS/Undeclared	A-03	2020	X
Tirmizi	Fawaz	Student	ENGR	Student - ECE/CS/Undeclared	A-04	2020	X
lastian	Jared	Student	ENGR	Student - Mech/Aero/Ag/Bio	B-01	2020	X
licholson	Jessica	Student	ENGR	Student - Mech/Aero/Ag/Bio	B-01	2020	X
asiak	Maksymilian	1	ENGR	Student - CEE/IESE/MatSE/NPRE/Physics	C-01	2020	A
'un	Dana	Student	ENGR	Student - CEE/IESE/MatSE/NPRE/Physics	C-01	2020	A
	VACANT		FAA	Architecture	01-1	2020	~
	VACANT		FAA	Architecture	01-1	2021	
ingscholt	VACANT	Assistant Professor	FAA	Architecture	01-3	2020	v
ingscheit.	Emmy	Assistant Professor	FAA	Art and Design	02-1	2021	X
Thomas	Nekita	Assistant Professor	FAA	Art and Design	02-2	2021	A

LAST	FIRST	TITLE	COLLEGE	UNIT	SEAT	TERM	11/11/19
Theide	Billie	Professor	FAA	Art and Design	02-4	2020	Х
Simson	Kirsie	Associate Professor	FAA	Dance	03-1	2021	Α
Deal	Brian	Professor	FAA	Landscape Architecture	04-1	2021	Α
Gallo	Donna	Assistant Professor	FAA	Music	05-1	2021	E
<pre>Kruse</pre>	Adam	Assistant Professor	FAA	Music	05-2	2021	Х
Peterson	Elizabeth	Clinical Professor	FAA	Music	05-3	2020	Х
McCall	Joyce	Assistant Professor	FAA	Music	05-4	2021	E
Magee	Gayle	Professor	FAA	Music	05-5	2020	E
Dee	John	Professor	FAA	Music	05-6	2021	X
Silvers	Michael	Assistant Professor	FAA	Music	05-7	2020	X
Miraftab	Faranak	Professor	FAA	Urban and Regional Planning	06-1	2020	E
Boesche	John	Associate Professor	FAA	Theatre	07-1	2021	A
Ienkins	Jeffrey Eric	Professor	FAA	Theatre	07-2	2021	X
Ackerman	Christopher	Student	FAA	Student	A-01	2020	X
Griffin	Casey	Student	FAA	Student	A-01	2020	X
Icardo Isasa	Ane	Student	GRAD	Student	A-02 A-01	2020	X
Bambenek	John	Student	GRAD	Student	A-01 A-02	2020	X
Guruparan	Akil	Student	GRAD	Student	A-02 A-03	2020	A
•		Student		Student		2020	
Saez Fajardo	Sara		GRAD		A-04		A
	VACANT	Student	GRAD	Student	A-05	2020	
	VACANT	Student	GRAD	Student	A-06	2020	
	VACANT	Student	GRAD	Student	A-07	2020	
	VACANT	Student	GRAD	Student	A-08	2020	
	VACANT	Student	GRAD	Student	A-09	2020	
	VACANT	Student	GRAD	Student	A-10	2020	
	VACANT	Student	GRAD	Student	A-11	2020	L
Clancy	Kathryn	Associate Professor	LAS	Anthropology	01-1	2020	Х
	VACANT		LAS	Anthropology	01-2	2021	
Mayer	Alexander	Associate Professor	LAS	East Asian Languages and Cultures	02-1	2021	Х
Kemball	Athol	Professor	LAS	Astronomy	03-1	2020	A
O'Dwyer	James	Associate Professor	LAS	Plant Biology	04-1	2020	Х
Kaufman	Brett	Assistant Professor	LAS	Classics	05-1	2021	E
Russell	Lindsay	Associate Professor	LAS	English	06-1	2021	Α
Gilmore	Shawn	Senior Lecturer	LAS	English	06-2	2020	Х
Slobodnik	Syd	Senior Instructor	LAS	English	06-3	2020	Х
Morris	David	Senior Lecturer	LAS	English	06-4	2021	E
Basu	Anustup	Associate Professor	LAS	English	06-5	2020	Α
Hurley	Michael	Lecturer	LAS	English	06-6	2020	E
McVicker	Zachary	Lecturer	LAS	English	06-7	2021	Α
Francis	Bettina	Associate Professor	LAS	Entomology	07-1	2020	Х
Fagyal	Zsuzsanna	Associate Professor	LAS	French & Italian	08-1	2020	Х
Wilson	David	Professor	LAS	Geography & Geographic Information Science	09-1	2020	Α
Sanford	Rob	Research Associate Professor	LAS	Geology	10-1	2020	X
Conroy	Jessica	Assistant Professor	LAS	Geology	10-2	2021	X
Niekerk	Carl Hendrik		LAS	Germanic Languages & Literature	11-1	2021	A
Brennan	James	Associate Professor	LAS	History	12-1	2021	X
Mathisen	Ralph	Professor	LAS	History	12-2	2021	A
Symes	Carol	Associate Professor	LAS	History	12-3	2021	A
Vesbitt	Stephen	Associate Professor	LAS	Atmospheric Sciences	00-1	2020	X
ranks	Suzanne	Teaching Assistant Professor	LAS	Linguistics	13-1	2021	E
ranks Yan	Xun	Assistant Professor	LAS	Linguistics	13-1	2020	X
Zalesov	Sergei	Lecturer	LAS	Linguistics	13-2	2020	E
Alesov	Randy	Professor	LAS	Mathematics	13-3	2021	X
Dikhberg	Timur	Research Associate Professor	LAS	Mathematics	14-1	2021	X
Reznick		Professor	LAS		14-2	2021	
	Bruce			Mathematics			X
vanov	Sergei	Professor	LAS	Mathematics	14-4	2020	E
unge	Marius	Professor	LAS	Mathematics	14-5	2020	X
Rezk	Charles	Associate Professor	LAS	Mathematics	14-6	2020	Х
	VACANT		LAS	Mathematics	14-7	2021	4
Kuzminov	Andrei	Professor	LAS	Microbiology	15-1	2021	X
/arden	Helga	Associate Professor	LAS	Philosophy	16-1	2021	Х
Kemper	Kim Joogsool	Professor	LAS	Molecular & Integrative Physiology	17-1	2020	E
Ksiazkiewicz	Aleksander	Assistant Professor	LAS	Political Science	18-1	2020	Х
	VACANT		LAS	Political Science	18-2	2021	

LAST	FIRST	TITLE	COLLEGE	UNIT	SEAT	TERM	11/11/19
Fisher	Cindy	Professor	LAS	Psychology	19-1	2020	Х
Barbey	Aron	Associate Professor	LAS	Psychology	19-2	2021	Α
Derringer	Jamie	Assistant Professor	LAS	Psychology	19-3	2021	Х
Laurent	Heidemarie	Assistant Professor	LAS	Psychology	19-4	2020	E
Kwapil	Thomas	Professor	LAS	Psychology	19-5	2020	Х
Cooper	David	Associate Professor	LAS	Slavic Languages & Literatures	20-1	2020	Х
Leicht	Kevin	Professor	LAS	Sociology	21-1	2020	A
Tolliver	Joyce	Associate Professor	LAS	Spanish and Portuguese	22-1	2020	x
Jegerski	Jill	Associate Professor	LAS	Spanish and Portuguese	22-2	2020	E
Costello	Thomas	Instructor	LAS	Communication	22-2	2021	X
			LAS		23-1		E A
Cisneros	Josue David	Associate Professor		Communication		2021	E
	VACANT		LAS	Communication	23-3	2020	
Roseman	Charles	Associate Professor	LAS	Animal Biology	24-1	2020	X
Gennis	Robert	Professor Emeritus	LAS	Biochemistry	25-1	2021	A
Shen	Mei	Research Assistant Professor	LAS	Chemistry	26-1	2021	Х
Girolami	Gregory	Professor	LAS	Chemistry	26-3	2020	Х
Koerner	Michael	Lecturer	LAS	Chemistry	26-4	2020	A
Leckband	Deborah	Professor	LAS	Chemical & Biomolecular Engineering	27-1	2020	E
Harley	Brendan	Professor	LAS	Chemical & Biomolecular Engineering	27-2	2021	Α
Belmont	Andrew	Professor	LAS	Cell & Developmental Biology	28-1	2020	Α
Culpepper	Steve	Associate Professor	LAS	Statistics	29-1	2021	Х
Kinson	Christopher	Teaching Assistant Professor	LAS	Statistics	29-2	2020	A
Li	Во	Associate Professor	LAS	Statistics	29-3	2020	E
Perry	Maretin	Professor	LAS	Economics	30-1	2021	A
Williamson	HF (Bill)	Associate Professor Emeritus	LAS	Economics	30-1	2021	X
Buckley	. ,	Associate Professor	LAS	Economics	30-2	2020	A
	Bryan						
McDuffie	Erik	Associate Professor	LAS	African American Studies	31-1	2020	X
Nguyen	Mimi	Associate Professor	LAS	Gender and Womens Studies	32-1	2021	E
Paik		Associate Professor	LAS	Asian American Studies	33-1	2021	E
Gilbert	Matthew	Professor	LAS	American Indian Studies	34-1	2021	A
Rosas	Gilberto	Associate Professor	LAS	Latina/Latino Studies	35-1	2020	Х
Rosenstock	Bruce	Professor	LAS	Religion	36-1	2020	Х
Kaganovsky	Lilya	Professor	LAS	Comparative Literature	37-1	2020	E
Fogelman	Charles	Lecturer	LAS	General	38-1	2021	E
Katsnelson	lan	Student	LAS	Student - Life Sciences	A-01	2020	E
Kosmopoulos	James	Student	LAS	Student - Life Sciences	A-02	2020	Х
Namik	Deniz	Student	LAS	Student - Life Sciences	A-03	2020	Α
Kingsley	Caitlin	Student	LAS	Student - Humanities	B-01	2020	Α
Poulosky	Nathan	Student	LAS	Student - Humanities	B-02	2020	Х
	VACANT	Student	LAS	Student - Humanities	B-03	2020	
Sekiguchi	Anna	Student	LAS	Student - Physical Sciences/Math	C-01	2020	Α
Thompson	Natalie	Student	LAS	Student - Physical Sciences/Math	C-02	2020	X
•	John	Student	LAS	Student - Physical Sciences/Math	C-02	2020	
Compton				· · ·			A
Surdykowski	Ethan	Student	LAS	Student - Physical Sciences/Math	C-04	2020	A
Xiao	Alissa	Student	LAS	Student - Social Sciences	D-01	2020	A
Zhou	Susan	Student	LAS	Student - Social Sciences	D-02	2020	X
Finley	Marissa	Student	LAS	Student - Social Sciences	D-03	2020	A
Olowomeye	Victor	Student	LAS	Student - Social Sciences	D-04	2020	A
Alam	Rummana	Teaching Assistant Professor	LAW	Law	01-1	2021	Х
Stahl	Catherine	Teaching Assistant Professor	LAW	Law	01-2	2021	Х
Braun	Matthew	Teaching Assistant Professor	LAW	Law	01-3	2020	Х
Kar	Robin	Professor	LAW	Law	01-4	2020	Х
Dugard	Claire	Student	LAW	Student Professional	A-01	2020	Х
LB Twarog	Emily	Associate Professor	LER	School of Labor And Employment Relations	01-1	2021	E
Benton	Richard	Assistant Professor	LER	School of Labor And Employment Relations	01-2	2020	X
Benson	Sara	Assistant Professor	LIBR	Library	01-1	2020	X
Maher	William	Professor	LIBR	Library	01-1	2020	X
Trei	Kelli	Assistant Professor	LIBR	Library	01-2	2021	X
							-
Holder	Sara	Associate Professor	LIBR	Library	01-4	2021	E
Sotomayor	Antonio	Assistant Professor	LIBR	Library	01-5	2021	X
Williams	Sarah	Associate Professor	LIBR	Library	01-6	2021	X
Clifton	Dionne	Lecturer	MDA	Advertising	01-1	2020	A
Hall	Steve	Senior Lecturer	MDA	Advertising	01-2	2021	E
Meyer	Eric	Associate Professor	MDA	Journalism	02-1	2021	Х

LAST	FIRST	TITLE	COLLEGE	UNIT	SEAT	TERM	11/11/19
Valdivia	Angharad	Research Professor	MDA	Media and Cinema Studies	03-1	2021	Х
Foster	Madelyn	Student	MDA	Student	A-01	2020	Α
Rosencranz	Holly	Clinical Associate Professor	MED	MED	01-2	2021	E
	VACANT	Student	MED	Student Professional	A-01	2020	
Bonn	Maria	Senior Lecturer	SIS	School of Information Sciences	01-1	2020	Х
Bashir	Masooda	Assistant Professor	SIS	School of Information Sciences	01-2	2021	Х
La Barre	Kathryn	Associate Professor	SIS	School of Information Sciences	01-3	2021	Х
Billiot	Shanondora	Assistant Professor	SSW	School of Social Work	01-1	2021	E
Larrison	Christopher	Associate Professor	SSW	School of Social Work	01-2	2020	Х
Munoz-Najar	Julie	Clinical Assistant Professor	SSW	School of Social Work	01-3	2020	Х
Rao	Sudarshana	Student	SSW	Student	A-01	2020	A
Inoue	Makoto	Assistant Professor	VMED	Comparative Biosciences	01-1	2021	Х
Mahoney	Megan	Associate Professor	VMED	Comparative Biosciences	01-2	2020	E
Barger	Anne	Clinical Professor	VMED	Veterinary Clinical Medicine	02-1	2021	E
Jason	Pieper	Clinical Assistant Professor	VMED	Veterinary Clinical Medicine	02-2	2021	Α
Johnson-Walker	Yvette	Lecturer	VMED	Veterinary Clinical Medicine	02-3	2021	E
Garrett	Laura	Clinical Professor	VMED	Veterinary Clinical Medicine	02-4	2020	E
Fan	Timothy	Professor	VMED	Veterinary Clinical Medicine	02-5	2020	Α
Aldridge	Brian	Clinical Professor	VMED	Veterinary Clinical Medicine	02-6	2020	Х
Aldridge	Russhawn	Lecturer	VMED	Veterinary Clinical Medicine	02-7	2021	Х
Lau	Gee	Associate Professor	VMED	Pathobiology	03-1	2021	Α
Zuckermann	Federico	Professor	VMED	Pathobiology	03-2	2020	E
Edwards	Darec	Student	VMED	Student Professional	A-01	2020	E

126

A absent

E excused

X present --- vacant

Jacont

### **CC.20.15** December 9, 2019

### UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN SENATE

COMMITTEE ON COMMITTEES (Final; Action)

CC.20.15		Election of Members on Standing Committees of the Senate and Other Bodies with Senate Representation				
	E ON CONDUCT GOVERNANCE					
To fill one	student vacancy due to t	he resignation	of Daniela Martinez (EDUC).			
	Sudarshana Rao	SSW	Term Expires 2020			
<u>Ерисатіом</u> To fill one	AL POLICY faculty vacancy due to th	e resignation o	of Valleri Robinson (FAA).			
	Jim Shriner	EDUC	Term Expires 2020			
To fill one	student vacancy due to t	he resignation	of Thomas Kuipers (GRAD).			
	Hilary Pham	BUS	Term Expires 2020			
EQUAL OPPORTUNITY & INCLUSION To fill the chair vacancy due to the resignation of Rolando Romero (LAS).						
	JJ Pionke	AHS	Chair Term Expires 2020			

### FACULTY & ACADEMIC STAFF BENEFITS

To fill one faculty vacancy due to the resignation of Runhuan Feng (LAS).

Jennifer Bergmark FAA Term Expires 2020

### STUDENT DISCIPLINE

To fill one student vacancy due to the resignation of Jessica Mendoza (LAS).

Sudarshana Rao SSW Term Expires 2020

### SENATE REPRESENTATION TO OTHER BODIES

### **GENERAL EDUCATION BOARD**

To fill one student vacancy unfilled during the spring 2019 election, and two student vacancies due to the resignations of Casey Griffin (LAS) and John Fetscher (LAS).

Daniela Martinez	EDUC	Term Expires 2020
Shelby Sears	AHS	Term Expires 2020
Kat Carranza Bahena	LAS	Term Expires 2021

LAW

### MILITARY EDUCATION COUNCIL

To fill one student vacancy unfilled during the spring 2019 election.

Mark Olguin

Term Expires 2020

Сомміттее ол Сомміттееs Christopher Span, Chair Rummana Alam Jared Bastian Laura Christianson Tim Flanagin Laura Garrett Ane Icardo Isasa Jennifer Monson Deniz Namik Jenny Roether, *ex officio* 

Nominations from the floor must be accompanied by the nominee's signed statement of willingness to serve if elected. The statement shall be dated and include the name of the position to be filled. If present, the nominee's oral statement will suffice. All nominations must be in accordance with Senate *Bylaws*.

CC.20.15 Page 2 of 2

### UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN SENATE COMMITTEE ON HONORARY DEGREES (Final; Action)

### HD.20.06 Nominations for Honorary Degree Awards

The Senate Committee on Honorary Degrees is pleased to nominate the following individuals for an honorary degree award to be conferred at the May 2020 Commencement exercises:

- James Delany
- Mario Molina
- Rahul Pandharipande

Information relative to the background and achievements of these nominees is attached. Based on the criteria approved by the Senate, the Committee has selected these individuals for Senate consideration.

The Committee wishes to express its sincere appreciation to all who participated in the process, particularly those who spent considerable amounts of time and effort in preparing documentation for these nominees.

COMMITTEE ON HONORARY DEGREES Matthew Wheeler, Chair Fred Johnson Asiimwe Larry Fahnestock Ane Icardo Isasa Prasanta Kalita Susan Koerner Rolando Romero

## James E. Delany Commissioner Big Ten Conference

**EDUCATION:** 

B.S., Political Science, University of North Carolina, 1970 J.D., Law, University of North Carolina, 1973

### Nominated by: Matthew B. Wheeler, Professor and former Big Ten FAR, Department of Animal Sciences, University of Illinois at Urbana-Champaign Jeffrey R. Brown, Dean, Gies College of Business, University of Illinois at Urbana-Champaign Josh H. Whitman, Director, Division of Intercollegiate Athletics

BASIS FOR NOMINATION:

James Delany has been a tireless advocate for students especially student athletes. He has increased the opportunities for many students, including many "first in the family", to attend college. His work to increase the participation by women in sports and his long-standing and unwavering support for gender equity through Title IX has increased scholarship and participation opportunities for women in Big Ten institutions. This was accomplished by the Delaney initiated Gender Equity Action Plan in 1992. The Big Ten leads all conferences with more than 4,600 female students playing sports. Big Ten institutions have claimed more than 120 national titles in women's sports.

Jim Delany has been a tireless advocate for the welfare of student athletes by initiating 4-year guaranteed scholarships at Big Ten institutions well before the national initiative by the NCAA. He also championed providing three meals per day for all student athletes not just those on scholarship. This program has provided nutritious meals to countless students at our Big Ten Institutions.

Delany has been a tireless advocate for gender equity and racial equality. He has led the Big Ten conference's diversity and inclusion efforts where they have become a point of pride and results — for the league's membership and particularly for Delany, who has directed the Big Ten since 1989. *"Having a commitment to diversity comes from people's hearts, comes from policies and initiatives, and it comes from the strength and character of the people pursuing change," Delany said. "It requires a mindset."* For those who have come through the conference's Chicago office, they cite the league's pipeline of diverse talent that's been created by a series of mentoring relationships. One relationship begot another and a pattern of diversity evolved.

Finally, Delany has spear-headed a number of academic initiatives in Big Ten institutions including the Big Ten-Ivy League Traumatic Brain Injury (TBI) Research Collaboration to study TBI not only in athletes, but in soldiers and others with traumatic head injuries. This has resulted in research funding support by the NIH, NFL, and Department of Defense. Delany has also been instrumental in organizing, coordinating, and financially supporting the Big Ten Cancer Centers at the various Big Ten Institutions and supported by the Big Ten Academic Alliance (formerly the CIC).

In summary, it is altogether fitting that the University of Illinois award the honorary Doctor of Philosophy degree to James E. Delany in recognition of a lifetime commitment to higher education; his devotion to the academic, athletic, and personal excellence of the student athlete; and his many contributions to college sports and the hundreds of thousands of students who participate in them.

### EXCERPT FROM THE NOMINATION LETTER:

"Commissioner Delany is only the Big Ten's fifth commissioner since its founding in 1896. He has led the Big Ten Conference, from 1989 until his retirement in 2019. The Big Ten has grown to 14 member institutions during Delany's tenure, including the additions of Penn State in 1991, Nebraska in 2011 and Maryland and Rutgers in 2014. With the conference's footprint now stretching from the Colorado border to the Atlantic Ocean and more than five million alumni across the country, Delany continues to work toward strengthening traditional relationships while building a presence in a new region.

Under Delany, the Big Ten has been a champion for Title IX. The conference was the first to voluntarily adopt participation goals for female students competing in intercollegiate athletics as the Big Ten initiated the Gender Equity Action Plan in 1992. The Big Ten leads all conferences with more than 4,600 female students playing sports and features more than 870 televised or streamed women's athletic events.

Delany and the Big Ten have been active in the community, creating the school outreach program SCORE (Success Comes Out of Reading Everyday). For more than 25 years, the conference has partnered with Chicago elementary school to improve reading performance. The Big Ten has also established numerous community programs surrounding its men's and women's basketball tournaments and football championship game. Delany has been a tireless advocate for gender equity and racial equity."

### HONORS/AWARDS (NOT INCLUSIVE):

2012	UNC Distinguished Alumni Award
2014	Torch of Liberty Award
2016	John W. Bunn Lifetime Achievement Award
2018	SportsBusiness Journal's Twenty for 20

### EXCERPTS FROM THE LETTERS OF RECOMMENDATION:

### Robert A. Bowlsby, II, Commissioner, Big 12 Conference

"Mr. Delany and I have been colleagues and friends for nearly 40 years. During the period of our association, Mr. Delany has distinguished himself as an educator, a mentor, and leader while consistently and without exception conducting himself with the utmost in integrity."

### Ron Guenther, Former Athletic Director, University of Illinois at Urbana-Champaign

"In the 1990's, under Mr. Delany's oversight, the Conference voluntarily implemented a gender equity action plan that established a minimum target of 60% male—40% female participation in athletics. No other conference had such a program at the time. Over three decades it has resulted in a significant increase in opportunities for thousands of women attending B1G institutions."

### Keith A. Marshall, Executive Director, Big Ten Academic Alliance

"Commissioner Delany's most significant contribution is through his support of the Big Ten-Ivy League Traumatic Brain Injury Research Collaboration. It was Commissioner Delany's vision, concern of the welfare of student-athletes, and understanding of the power of collaboration that led to this partnership with the Ivy League. The TBI Research Collaboration's power is that it brings together a unique collection of individuals – researchers, clinicians, athletic trainers, team doctors, coaches, etc. – across two of the most significant conferences in the country to address a pressing societal issue. This multidisciplinary and multi-institutional approach is rapidly leading to the largest, most comprehensive database of TBI in college sport in the country. I am not aware of any similar academic/athletic research initiative at any other athletic conference in the country and it is not hyperbole to say that this critical initiative would not exist with Commissioner Delany's vision and leadership. Through the Big Ten-Ivy League Traumatic Brain Injury Research Collaboration, Commissioner Delany will be impacting the lives of student-athletes and changing the very fabric of college sports for decades to come.

More importantly, no other commissioner in the country has been as supportive of the academic collaboration of his/her member institutions. Through his unwavering support of the Big Ten Academic Alliance and his vision to bring together an unprecedented collaboration of academic and athletics across two conferences to better understand traumatic brain injuries, Commissioner Delany has had a tremendous and lasting impact outside the normal sphere of a commissioner's purview."

### Stanley O. Ikenberry, President and Professor Emeritus, University of Illinois

"As the longest serving Commissioner of the Big Ten Conference he has led the quest to offer high quality athletic programs giving life-defining opportunities for students while at the same time modeling the academic values and integrity crucial to a great university."

## Mario J. Molina Professor Department of Chemistry and Biochemistry Scripps Institution of Oceanography University of California, San Diego

### **EDUCATION:**

Chemical Engineer Degree, Universidad Nacional Autónoma de México, 1965 Postgraduate, University of Freiburg, West Germany, 1967 Ph.D., Physical Chemistry, University of California, Berkeley, 1972

Nominated by: Elvira de Mejia, Professor and Director, Division of Nutritional Sciences, University of Illinois at Urbana-Champaign

> Donald J. Wuebbles, The Harry E Preble Professor of Atmospheric Sciences, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign Alex Winter-Nelson, Associate Dean, College of ACES Office of International Programs, University of Illinois at Urbana-Champaign

### **BASIS FOR NOMINATION:**

Dr. Mario Molina is a pioneer and one of the main scientists in the world dedicated to atmospheric chemistry. Together with Frank Sherwood Rowland, he co-authored the 1974 original article predicting the depletion of the ozone layer as a direct consequence of the missions of certain industrial gases, chlorofluorocarbons (CFCs), earning them the 1995 Nobel Prize in Chemistry, which made Molina the first Mexican-born scientist to receive a Nobel Prize in Chemistry. His research and publications on the subject lead to the United Nations Montreal Protocol, the first international treaty that has faced with effectiveness an environmental problem of global scale and anthropogenic origin. Professor Molina and his research team published a series of articles between 1976 and 1986 that identified the chemical properties of compounds that play an essential role in the breakdown of the stratospheric ozone layer. Subsequently, they demonstrated in a laboratory the existence of a new class of chemical reactions that occur in the surface of ice particles including those that are present in the atmosphere. They also proposed and demonstrated in the lab a new sequence of catalystic reactions that explain a major part of the destruction of the ozone in the polar stratosphere.

Molina is a member of the National Academy of Sciences and the Institute of Medicine in the United States, and for eight years he was one of the 21 scientists that served on President Barack Obama's Committee of Advisors on Science and Technology (PCAST); he also previously served on President Bill Clinton's PCAST. He is a distinguished member of the Vatican's Pontifical Academy of Sciences, the National College of Mexico, Mexican Academy of Science, and the Mexican Academy of Engineering, among others.

### **EXCERPT FROM THE NOMINATION LETTER:**

Dr. Molina obtained a chemical engineering degree from the Autonomous University of Mexico (UNAM) in 1965. He then conducted postgraduate training at the University of Freiburg in Germany in 1967. He conducted his formal graduate studies in the U.S. and received a Ph.D. degree in Physical Chemistry from the University of California-Berkeley in 1972. Soon after joining the University of California Irvine, Dr. Molina (with Professor Sherwood Rowland) determined that the chlorine atoms produced from the decomposition of industrially-produced chlorofluorocarbons (CFCs), being used as refrigerants and for other uses, would act as a catalyst for the destruction of stratospheric ozone. This

phenomenon could start a seriously damaging chain reaction to reduce the ozone layer, with resulting concerns about increased ultraviolet radiation effects on human health. They published their findings in 1974 in the Journal Nature. Because of their work, new regulations have been established in several countries, following the Montreal Protocol, to protect the ozone layer by regulating the use of CFCs.

### HONORS/AWARDS (NOT INCLUSIVE):

1987	American Chemical Society Esselen Award
1989	NASA Medal for Exceptional Scientific Achievement
1989	United Nations Environment Program Global 500 Award
1993-present	Member, U.S. National Academy of Sciences
1995	Nobel Prize in Chemistry
1995	United Nations Environment Program Ozone Award
1996-present	Member, Institute of Medicine
1998	American Physical Society Fellow
2000-present	Member, Pontifical Academy of Sciences
2002-present	Fellow of the American Association for the Advancement of Science
2002	Environment Award, Heinz Family Foundation
2013	Presidential Medal of Freedom
2014	United Nations Champions of the Earth Award
2016	Member, National Academy of Sciences of the Argentinian Republic
2018	The Climate and Clean Air coalition Award, CA

### EXCERPTS FROM THE LETTERS OF RECOMMENDATION:

### Antonio J. Busalacchi, President, University Corporation for Atmospheric Research

"Simply put, Mario Molina is a pioneer and leader in atmospheric chemistry and also a leader in climate science. He received the Nobel Prize in Chemistry in 1995 for his pioneering studies of the effects of chlorofluorocarbons on stratospheric ozone. This work helped lead to the Montreal Protocol to protect the stratospheric ozone layer, the first major worldwide agreement to protect the environment."

# Evan H. DeLucia, G. William Arends Professor of Integrative Biology, Baum Family Director, Institute for Sustainability, Energy, and Environment, University of Illinois at Urbana-Champaign

"Not to be content only conducting laboratory research, Professor Molina went on to found the Molina Center for Energy and the Environment, a not-for-profit dedicated to bringing together all voices with the aim of solving wicked environmental challenges and to train the next generation of environmental leaders."

### J. Michael Kuperberg, Executive Director, U.S. Global Change Research Program

"In my area, Dr. Molina's contributions have been important. He chaired the American Association for the Advancement of Science Climate Science Panel that developed the "What We Know Initiative." He has also been Co-chair of the Steering Committee of the United Nations Environment Program (UNEP) Assessment of Efficient and Climate Friendly Cooling that is intended to advance the Kigali Amendment to phase out the use of HFCs, strong greenhouse gases widely used as refrigerants.

Dr. Molina has a well-deserve reputation for high-impact science, but I believe that his greatest strength comes from his desire to make a difference by helping society understand and respond to the environmental challenges that he studies."

## Rahul Pandharipande Professor of Mathematics Swiss Federal Institute of Technology Zurich (ETH)

### **EDUCATION:**

A.B., Mathematics, Princeton University, 1990, *summa cum laude* Ph.D., Mathematics, Harvard University, 1994

### Nominated by: Jeremy Tyson, Professor and Chair, Department of Mathematics, University of Illinois at Urbana-Champaign Matthias Grosse Perdekamp, Professor and Head, Department of Physics, University of Illinois at Urbana-Champaign

### BASIS FOR NOMINATION:

Rahul Pandharipande is an eminently distinguished and prolific mathematician who has been the driving force in the central field of Modern Enumerative Geometry for more than 20 years, a field which he largely created. He has garnered many prestigious awards for his research, which continues to have high impact in theoretical physics as well. His influence extends far beyond his own exceptional work, as his former Ph.D. students are going on to remarkable careers of their own. As value added, he grew up in Urbana and has deep ties to our campus.

### EXCERPT FROM THE NOMINATION LETTER:

"Professor Pandharipande was one of only 21 mathematicians worldwide invited to give a plenary address at the most recent meeting of the International Congress of Mathematicians, held once every four years. The plenary addresses are for mathematicians who are making the most significant contributions to all of mathematics, irrespective of subfield. The Compositio Prize is awarded to exactly one research paper every 3 years which is published in the top tier Journal Compositio Mathematicae. Professor Pandharipande received the award for a paper connecting modern enumerative invariants to theoretical physics. The Clay Research Award is awarded annually to 1-3 mathematicians worldwide. When Professor Pandharipande won the award in 2013, he was the only recipient. This was in fact one of only two years when there was a single recipient of the Clay Research Award. The only other time was in 1999 when Andrew Wiles garnered the award following his celebrated proof of Fermat's Last Theorem.

The field of Enumerative Geometry was reborn in the 1990s following an influx of news ideas from theoretical physics, with Pandharipande at the helm in laying out the structure of the field and developing the formalism which is now standard. The field is a subfield of the larger field of algebraic geometry, the study of the solutions to systems of polynomial equations.

Rather than focus on the solutions themselves, Pandharipande's focus is on understanding the structure of the solutions of entire families of systems of equations. He has repeatedly extracted hidden structures from this approach, and applied these insights to repeatedly solve major unsolved problems in the field.

While Professor Pandharipande's research is in mathematics, he has frequently drawn on inspiration and ideas from theoretical physics over the course of the last two decades. He has found proofs of deep structures expected from mathematical physics. More generally, his work is uniformly of the highest caliber. He has published more than 100 papers, at least nine of which are published in the elite Mathematics journals *Annals of Mathematics* and *Inventiones Mathematicae.*"

### HONORS/AWARDS (NOT INCLUSIVE):

2000-2005	David and Lucille Packard Foundation Fellowship
2010	Compositio Prize
2013	Clay Research Prize
2013	Infosys Prize for Mathematics
2018	Invited speaker (plenary), International Congress of Mathematicians (ICM)
2015-2019	Einstein Visiting Fellow (Berlin)

EXCERPTS FROM THE LETTERS OF RECOMMENDATION:

# János Kollár, Donner Professor of Science and Professor of Mathematics, Department of Mathematics, Princeton University

"Pandharipande is one of the leading mathematicians worldwide. His main research area is algebraic geometry, especially its enumerative and quantum cohomology aspects. Pandharipande made groundbreaking contributions both to foundational questions of quantum cohomology and to its applications. The only person comparable to him in achievements and stature is Andrei Okounkov."

### William Fulton, Oscar Zariski Distinguished University Professor, Department of Mathematics, University of Michigan

"I have admired Pandharipande's work since I saw his remarkable PhD thesis – one of a handful of the strongest theses I have seen in my career of nearly 60 years.

Among the algebraic geometers I have no hesitation in saying that Pandharipande has done the most. He was instrumental in putting solid mathematical foundations under the theory when it began in the 1990s. Since then he has made dozens of important contributions – far more, and more important, than anyone else. These have been published in our finest journals. His productivity it simply awesome.

Pandharipande is a mathematician of great power, seeming able to solve notoriously difficult problems with ease."

### Davesh Maulik, Professor Mathematics, Department of Mathematics, MIT

"Pandharipande is one of the great mathematicians of this century, a true giant in the subject of algebraic geometry, who has over the years developed his own field of inquiry, generating a huge amount of beautiful mathematics that several others have devoted their careers to understanding.

In addition to this, Pandharipande has been an amazing mentor to the next generation of algebraic geometers. Faculty at institutions all over the world have been trained by him, either as graduate students or as postdoctoral students, including faculty at Berkeley, MIT, Michigan, Utah, Caltech, etc."

### UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN SENATE

COMMITTEE ON UNIVERSITY STATUTES AND SENATE PROCEDURES (First Reading; Information)

SP.20.09 Proposed Revision to the *Constitution,* Article II, Section 1.b; Article III, Section 1; and Article IV, Section 1

### BACKGROUND

The proposed change is to update the terminology used in describing someone who is seeking a degree. The term "candidates for a degree" indicates those who are receiving a degree rather than those who are in the process of pursuing a degree.

### RECOMMENDATION

The Senate Committee on University Statutes and Senate Procedures recommends the Senate approve the following proposed revision to the *Constitution*. Text to be deleted is <del>struck</del> through and text to be added is <u>underscored</u>. Adoption of amendments to the *Constitution* requires a two-thirds vote of the Senate at a second reading.

### PROPOSED REVISION TO THE CONSTITUTION, ARTICLE II, SECTION 1.B

- 1 Section 1. The faculty electorate is composed shall consist of those members of the academic
- 2 staff who are directly engaged in and responsible for the educational function of the University;
- 3 ordinarily this will involve teaching and research. Specifically, the <u>The</u> faculty electorate shall
- 4 consist of all persons of the campus non-visiting academic staff, other than excluding persons
- 5 holding administrative appointments in excess of one-half time (the exception to this exclusion
- 6 are executive officers of departments or similar units, and assistant or associate executive
- 7 officers of such units, who are otherwise eligible), who:
- a. Hold the modified or unmodified academic rank or title of professor, associate
   professor, or assistant professor, have at least a one-half time appointment, and are
   paid by the University; or
- b. Hold the academic rank or title of instructor or lecturer at any rank, have at least a
- 12 one-half time appointment, are paid by the University, and are not <del>candidates for</del>
- 13 <u>pursuing</u> a degree from this University; or

14

15	PROPOSED REVISION TO THE CONSTITUTION, ARTICLE III, SECTION 1
16	Section 1. The academic professional electorate is composed shall consist of those members of
17	the academic professional staff who are engaged in and responsible for the educational
18	function of the University; ordinarily this will involve teaching and research. Specifically, the
19	academic professional electorate shall consist of all persons of the campus non-visiting
20	academic staff who have a full-time appointment, are paid by the University, are not candidates
21	for <u>pursuing</u> a degree from this University, and who are members of the academic staff as
22	defined in the Statutes, Article II, Section 5, and satisfy the teaching or research criteria
23	established by the Senate Committee on Elections and Credentials and approved by the Senate.
24	
25	PROPOSED REVISION TO THE CONSTITUTION, ARTICLE IV, SECTION 1
26	Section 1. The student electorate shall consist of all persons actively pursuing a degree on this
27	campus who meet the eligibility requirements for voting and who are not members of the
28	faculty or academic professional electorate. Eligibility for voting shall require that the student
29	be:
30	a. In residence, <u>and</u>
31	b. <del>A candidate for</del> <u>pursuing</u> a degree.

UNIVERSITY STATUTES AND SENATE PROCEDURES Shawn Gilmore, Chair H. George Friedman Matthew Goodman Michael Grossman Samantha Lenoch William Maher Jeffrey Stein Kelli Trei Jessica Mette, *ex officio* Sharon Reynolds, *ex officio* Jenny Roether, *ex officio* 

### UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN SENATE

COMMITTEE ON UNIVERSITY STATUTES AND SENATE PROCEDURES (Final; Action)

SP.20.10 Revision to the *Bylaws*, Part C – Elections

### BACKGROUND

The proposed revisions will bring the *Bylaws* into alignment with the *Election Rules* for the academic professional (EC.19.03 approved by the Senate on 4/22/19), faculty (EC.18.04 approved by the Senate on 4/2/18), and student (EC.18.03 approved by the Senate on 12/10/18) electorates that were recently updated.

### RECOMMENDATION

The Senate Committee on University Statutes and Senate Procedures recommends the Senate approve the following amendments to the *Bylaws*, Part C – Elections. Text to be deleted is struck through and text to be added is <u>underscored</u>. Adoption of amendments to the *Bylaws* requires a two-thirds vote of the Senate.

### **REVISIONS TO THE BYLAWS PART C – ELECTION RULES**

- 1 1. Timing of Elections<del>;</del> and Election Rules
- a. Elections of senators shall take place during the spring semester, but not later than
  the eighth week of classes.
- 4 b. The Senate may delegate to the organization that conducts elections on behalf of the
- 5 governing organizations of the student body and/or the academic professional staff the
- 6 authority to conduct Senate elections concurrently with other elections that it
- 7 administers, pursuant to rules established by the Senate Committee on Elections and
- 8 Credentials and subject to approval by the Senate.
- 9 c. The Committee on Elections and Credentials shall establish Election Rules and
- 10 Procedures, subject to approval by the Senate, by which all these elections shall be held.
- 11 2. Elections and Credentials Committee
- 12 a. Faculty and Students: Each college or other analogous similar educational division
- 13 shall establish an elections and credentials committee to assist the Senate Committee

- on Elections and Credentials in the conduct of nominations and elections of senators in
  that college or division.
- 16 b. Academic Professional Staff: The Council of Academic Professionals shall be the
- elections and credentials committee for the academic professional electorate described
  in the *Constitution*, Article III, Section 1.
- 19 c. The Senate Committee on Elections and Credentials may delegate to the elections and
- 20 credentials committees in 2a and 2b such functions as it deems appropriate. Actions of
- these committees shall be subject to review by the Senate Committee on Elections and
   Credentials.
- 23 3. Joint Affiliation
- 24 A member of the electorate who is affiliated with two or more voting units may vote in
- and be elected from only one such unit, and shall designate the unit of choice in a
- 26 signed statement submitted by written notification to the Clerk of the Senate
- 27 Committee on Elections and Credentials. Such designation shall remain in effect until
- such time as a change is approved by the Committee.

UNIVERSITY STATUTES AND SENATE PROCEDURES Shawn Gilmore, Chair H. George Friedman Matthew Goodman Michael Grossman Samantha Lenoch William Maher Jeffrey Stein Kelli Trei Brent West Jessica Mette, *ex officio* Sharon Reynolds, *ex officio* Jenny Roether, *ex officio* 

### UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN SENATE

COMMITTEE ON UNIVERSITY STATUTES AND SENATE PROCEDURES (Final; Action)

### SP.20.14 Revision to the *Bylaws,* Part D.6 – Committee on Committees

### BACKGROUND

Currently, the academic professional member of the Senate Committee on Committees (CC) is selected by the Council of Academic Professionals (CAP). Other Senate committee members are elected by the full Senate and the Senate is given the opportunity to make floor nominations. To allow for CAP involvement, but still give the Senate the ability to make floor nominations, new language is proposed to allow for nominations by CAP and an election by the full Senate.

The proposed language is also based on the Report of the Eighth Senate Review Commission (XSR.19.01) Recommendation #7, Review Each Senate Committee's Duties and Membership. Specifically, the report recommends:

Revise the academic professional member selection process to bring it in line with all other Senate committee academic professional members. The academic professional members on CC are selected by the Council of Academic Professionals (CAP) while all other Senate committee academic professional members are elected by the full Senate (which allows for nominations from the floor).

### RECOMMENDATION

The Senate Committee on University Statutes and Senate Procedures recommends the approval of the following revisions to the *Bylaws*. Text to be deleted is struck through and text to be added is <u>underlined</u>. Adoption of amendments to the *Bylaws* requires a two-thirds vote of the Senate.

### **REVISION TO THE BYLAWS, PART D.6 – Committee on Committees**

- 1 a. Duties
- 2 The Committee shall:
- 3 Nominate the Chair and Vice-Chair of the Senate Executive Committee and appropriate
- 4 numbers of persons to serve on standing and ad hoc committees of the Senate, and on
- 5 other University bodies of which members are designated by the Senate.
- 6 b. Membership
- 7 The Committee shall consist of:

8	1.	Five senators who are members of the faculty electorate at the time of election,
9		with no two from the same college, school, institute, or similar unit;
10	2.	Three senators who are members of the student electorate, with no two from the
11		same college, school, institute, or similar unit, and at least one of whom shall be an
12		undergraduate and at least one of whom shall be a graduate or professional
13		student;
14	3.	One academic professional member <del>selected</del> <u>elected</u> by the <u>Senate from</u>
15		nominations made by the Council of Academic Professionals; and
16	4.	The Clerk of the Senate or the Clerk's designee (ex officio).

UNIVERSITY STATUTES AND SENATE PROCEDURES Shawn Gilmore, Chair H. George Friedman Matthew Goodman Michael Grossman Samantha Lenoch William Maher Jeffrey Stein Kelli Trei Brent West Jessica Mette, *ex officio* Sharon Reynolds, *ex officio* Jenny Roether, *ex officio* 

## UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN SENATE

COMMITTEE ON EDUCATIONAL POLICY (Final; Information)

### EP.20.42 Report of Administrative Approvals through November 18, 2019

Senate committees are authorized to act for and in the name of the Senate on minor matters. Below is a listing of the administrative approvals the Senate Committee on Educational Policy approved at its meeting on November 18, 2019. Additional information for each approval is attached.

### A. Undergraduate Programs

- 1. BS in Bioengineering To the required Orientation and Professional Development courses, add BIOE 100, Bioengineering Freshman Seminar (1 hour). In the Bioengineering Technical Core courses, *remove* BIOE 220, Bioenergetics (3 hours) and BIOE 301, Introductory Biomechanics, and *add* BIOE 210, Linear Algebra for Biomedical Data Science (3 hours). BIOE 210 replaces BIOE 301, which has not been offered for the past four years. BIOE 100, an orientation course, has been offered as BIOE 199 for the past three years in its current format and has been found to be helpful for students in the discipline, so the department wishes to add this 1-hour course. Removal of BIOE 220 plus adding BIOE 100 nets two additional hours of free electives, thereby increasing the range of choices for students. There is no change to the total number of hours required for the major.
- 2. BS in Aerospace Engineering Remove PHYS 213, Thermal Physics (2 hours), as a required core course and add AE 140, Aerospace Computer-Aided Design (2 hours) to the Aerospace Engineering Technical Core course requirements. There is considerable overlap between PHYS 213 and another required course in the curriculum, ME 200, Thermodynamics, and the departmental faculty determined students benefit most from ME 200. AE 140 is added to support student success throughout the curriculum, introducing CAD software early in the program which will help students with their senior design project, which relies on this software. There is no change to the total number of hours required for the major.
- 3. Minor in Materials Science and Engineering Previously, students in the minor were to select an introductory course from several different areas, including Metals, Polymers, and Electronic Materials, and then to select a senior lab course and an "Advanced Area" course from a list. This revision allows more flexibility for students in that they may select 9 hours total from a list of approved courses (rather than a specific course from different, specified areas). Added to this list of courses from which students may select are MSE 404, Laboratory Studies in Materials Science and Engineering (1.5 hours); MSE 454, Mechanics of Polymers (3 hours); MSE 456, Mechanics of Composites (3 hours); MSE 466, Materials in Electrochem Syst (3 hours); MSE 474, Biomaterials and Nanomedicine (3 hours); MSE 487, Materials for Nanotechnology (3 hours); MSE 488, Optical Materials (3 hours); and MSE 489, Matl Select for Sustainability (3 hours). These changes do not alter the total number of hours required for the minor.

- 4. BA in Dance Add DANC 125, Black Dances of Resistance (3 hours), to the list of elective options for the major's Theory/Pedagogy/History course requirement, from which students are to select 12 hours from a list of courses. This increases the range of options for students and does not change the total number of hours required for the major.
- 5. BS in Crop Sciences In the Horticultural Food Systems concentration, remove HORT 298, Undergraduate Seminar (1 to 3 hours) from the list of courses from which students select 15 hours of focus area electives. This course has been deactivated by the Department of Crop Sciences effective Fall, 2019. Seventeen courses remain in this list from which students can select, and there is no change to the total number of hours required for the concentration or for the major.

EP.20.42\_original Admin Approval #A1

Date Submitted: 10/15/19 4:08 pm

# Viewing: 10KP0408BS :

# **Bioengineering, BS**

Last approved: 08/12/19 8:35 am

Last edit: 11/15/19 8:28 am

Changes proposed by: Maddie Darling

Catalog Pages Using this Program

### <u>Bioengineering, BS</u>

## In Workflow

- 1. U Program Review
- 2. 1343 Head
- 3. KP Committee Chair
- 4. KP Dean
- 5. University Librarian
- 6. Provost
- 7. Senate EPC
- 8. Senate
- 9. U Senate Conf
- 10. Board of Trustees
- 11. IBHE
- 12. DMI

# Approval Path

- 10/15/19 4:19 pm Deb Forgacs (dforgacs): Approved for U Program Review
- 2. 10/15/19 5:38 pm Greg Underhill (gunderhi): Approved for 1343 Head
- 3. 11/13/19 7:54 amBrooke Newell(bsnewell):Approved for KPCommittee Chair
- 4. 11/13/19 10:35 am Candy Deaville (candyd): Approved for KP Dean
- 5. 11/13/19 11:58 am John Wilkin

https://nextcourses.illinois.edu/programadmin/

- (jpwilkin): Approved for University Librarian
- 6. 11/14/19 8:57 am Kathy Martensen (kmartens): Approved for Provost

## History

- 1. Dec 13, 2018 by Deb Forgacs (dforgacs)
- 2. Apr 9, 2019 by Deb Forgacs (dforgacs)
- 3. Jul 23, 2019 by Brooke Newell (bsnewell)
- 4. Jul 31, 2019 by Deb Forgacs (dforgacs)
- 5. Aug 12, 2019 by Deb Forgacs (dforgacs)

# Proposal Type

Proposal Type:

This proposal is for a: Revision

Proposal Title:

if this proposal is one piece of a multi-element change please include the other impacted programs here. *example: A BS revision with multiple concentration revisions* 

### Administrative approval: Revising UG Courses UG Lists Approval.

Is this program No available on campus and online?



11/15/2019 **Program Management Official Program** Bioengineering, BS Name Banner/Codebook Name BS: Bioengineering - UIUC Program Code: 10KP0408BS Major 0408 Minor Conc Code Code Code Degree Code BS **EP** Control **EP.20.42** Number Senate Approval Date Senate Conference Approval Date **BOT Approval** Date **IBHE** Approval Date Effective Date: Effective Catalog Fall 2020 Term Grainger College of Engineering Sponsor College Sponsor Bioengineering Department Sponsor Name Sponsor Email College Contact College Contact Email Is this program interdisciplinary? No Academic Level Undergraduate CIP Code 140501 - Bioengineering and Biomedical Engineering.

# Program Description and Justification

Justification for proposal change:

# (1) remove BIOE 220 from the program requirement, to be replaced with 2 hours of free electives

(2) replace BIOE 301 with BIOE 210 as a program requirement; BIOE 301 has not been offered for the past 4 years

(3) Add BIOE 100 as a program requirement; the orientation course has been offered as BIOE 199 and 100 for the past 3 years in its current format, this will become a required course in our program

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

# Admission Requirements

# Enrollment

Describe how this revision will impact enrollment and degrees awarded.

#### N/A

Estimated Annual Number of Degrees Awarded

No

Year One Estimate

5th Year Estimate (or when fully implemented)

**Delivery Method** 

This program is available: Face-to-Face

## Budget

Are there budgetary implications for this revision? Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

No

Additional Budget Information

Attach File(s)

# **Resource Implications**

#### Facilities

Will the program require new or additional facilities or significant improvements to already existing facilities?

No

#### Technology

Will the program need additional technology beyond what is currently available for the unit?

No

#### Non-Technical Resources

Will the program require additional supplies, services or equipment (non-technical)?

No

### Resources

#### Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc. Describe how the unit will support student advising, including job placement and/or admission to advanced studies.

#### No, the courses are currently being taught (BIOE 100, 210) and the courses are included in their existing teaching loads. BIOE 220 being removed from the program will not require additional resources.

#### Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

# None, textbooks are not required through these courses - instructors provide the materials necessary.

Instructional Resources

#### Program Management

Will there be any reduction in other course offerings, programs or concentrations by your department as a result of this new program/proposed change?

No

Does this new program/proposed change result in the replacement of another program?

No

Does the program include other courses/subjects impacted by the creation/revision of this program?

No

# Financial Resources

How does the unit intend to financially support this proposal?

Will the unit need to seek campus or other external resources?

No

Attach letters of support

Will an existing tuition rate be used or continue to be used for this program?

Yes

# **Program Regulation**

Describe how the program is aligned with or meets licensure, certification, and/or entitlement requirements, if applicable.

Briefly describe the plan to assess and improve student learning, including the program's learning objectives; when, how, and where these learning objectives will be assessed; what metrics will be used to signify student's achievement of the stated learning objectives; and the process to ensure assessment results are used to improve student learning.

Is the career/profession for graduates of this program regulated by the State of Illinois?

No

# Program of Study

"Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60 quarter credit hours) in upper division courses" (source:

https://www.ibhe.org/assets/files/PrivateAdminRules2017.pdf). For proposals for new bachelor's degrees, if this minimum is not

explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.

All proposals must attach the new or revised version of the Academic Catalog program of study entry. Contact your college office if you have questions.

Revised programs ep1413 (BioE revision).pdf BIOE side-by-side 10 15 2019.xlsx

Attach a side-by-side comparison with the existing program AND, if the revision references or adds "chose-from" lists of courses students can select from to fulfill requirements, a listing of these courses, including the course rubric, number, title, and number of credit hours.

#### Catalog Page Text

Catalog Page Text: Description of program for the catalog page. This is not official content, it is used to help build the catalog pages for the program. Can be edited in the catalog by the college or department.

Statement for Programs of Study Catalog

# Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as shown below.

# Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Course List

Code	Title	Hours
<u>ENG 100</u>	Engineering Orientation	0
<b>BIOE 100</b>	Bioengineering Freshman Seminar	1
<u>BIOE 120</u>	Introduction to Bioengineering	1
Total Hours		2

# Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

#### Course List

Code	Title	Hours
<u>CHEM 102</u>	General Chemistry I	3
<u>CHEM 103</u>	General Chemistry Lab I	1
<u>CHEM 104</u>	General Chemistry II	3
<u>CHEM 105</u>	General Chemistry Lab II	1
<u>MATH 221</u>	Calculus I 1	4
<u>MATH 231</u>	Calculus II	3

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Program Management

Code	Title	Hours
<u>MATH 241</u>	Calculus III	4
<u>MATH 285</u>	Intro Differential Equations	3
<u>PHYS 211</u>	University Physics: Mechanics	4
<u>PHYS 212</u>	University Physics: Elec & Mag	4
Total Hours		30

# **Bioengineering Technical Core**

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of bioengineering.

	Course List	
Code	Title	Hours
<u>BIOE 201</u>	Conservation Principles Bioeng	3
<u>BIOE 202</u>	Cell & Tissue Engineering Lab	2
<u>BIOE 205</u>	Signals & Systems in Bioengrg	3
<u>BIOE 206</u>	Cellular Bioengineering	3
BIOE 220	Bioenergetics	<del>3</del>
BIOE 301	Introductory Biomechanics	<del>3</del>
<u>BIOE 210</u>	Linear Algebra for Biomedical Data Science	3
<u>BIOE 302</u>	Modeling Human Physiology	3
<u>BIOE 303</u>	Quantitative Physiology Lab	2
<u>BIOE 310</u>	Comp Tools Bio Data	3
<u>BIOE 360</u>	Transport & Flow in Bioengrg	3
<u>BIOE 414</u>	Biomedical Instrumentation	3
<u>BIOE 415</u>	Biomedical Instrumentation Lab	2
<u>BIOE 420</u>	Intro Bio Control Systems	3
<u>BIOE 435</u>	Senior Design I	2
<u>BIOE 436</u>	Senior Design II	2
<u>BIOE 476</u>	Tissue Engineering	3
<u>CHEM 232</u>	Elementary Organic Chemistry I 2	4
<u>CS 101</u>	Intro Computing: Engrg & Sci	3
<u>MCB 150</u>	Molec & Cellular Basis of Life	4
Total Hours		51

# Track Electives

Students must complete 15 hours of engineering study which show coherence, focus, and purpose within a bioengineering context. Students may choose from among the following pre-approved tracks:

Biomechanics

Cell and Tissue Engineering

Computational and Systems Biology

Imaging and Sensing

Therapeutics Engineering

Alternately a student may devise a special track and set of courses which must be approved by the Bioengineering Department. In either case, overage hours in required courses may be counted toward the 15-hour minimum.



#### Program Management

Code Title	Hours
Track electives selected from a departmentally approved list of track elective courses.	15
Biomechanics Track	
List of Pre-Approved Biomechanics Track Required Courses	
TAM 211 Statics	3
TAM 212 Introductory Dynamics	3
TAM 251 Introductory Solid Mechanics	3
List of Pre-Approved Biomechanics Electives to choose remaining hours from:	
BIOE 461 Cellular Biomechanics	4
BIOE 498 Special Topics (Surgical Techniques )	3
BIOE 498 Special Topics (Finite Element Methods in Biomedicine)	3
ME 330 Engineering Materials	4
ME 481 Whole-Body Musculoskel Biomech	3
ME 482 Musculoskel Tissue Mechanics	3
ME 483 Mechanobiology	4
NPRE 498 Special Topics (Advanced Risk Analysis)	3
SE 402 Comp-Aided Product Realization	3
SE 423 Mechatronics	3
TAM 445 Continuum Mechanics	4
TMGT 461 Tech, Eng, & Mgt Final Project	2
Pre-Approved Biomechanics Track recommended free elective	
SE 101 Engineering Graphics & Design	3
Cell and Tissue Engineering Track	
BIOE 306 Biofabrication Lab	3
BIOE 416 Biosensors	3
BIOE 424 Modeling for Angiogenesis	3
BIOE 430 Intro Synthetic Biology	3
BIOE 460 Gene Editing Lab	3
BIOE 461 Cellular Biomechanics	4
BIOE 487 Stem Cell Bioengineering	3
BIOE 498 Special Topics (Finite Element Methods in Biomedicine)	3
CHBE 471 Biochemical Engineering	3
CHBE 472 Techniques in Biomolecular Eng	3
IE 330 Industrial Quality Control	3
MSE 404 Laboratory Studies in Materials Science and Engineering	1.5
MSE 470 Design and Use of Biomaterials	3
MSE 474 Biomaterials and Nanomedicine	3
ME 483 Mechanobiology	4
TMGT 461 Tech, Eng, & Mgt Final Project	2
Recommended Free Elective	
MCB 450 Introductory Biochemistry	3
Therapeutics Engineering Track	
ABE 446 Biological Nanoengineering	3
BIOE 306 Biofabrication Lab	3
BIOE 424 Modeling for Angiogenesis	3
BIOE 430 Intro Synthetic Biology	3
ttps://nextcourses.illinois.edu/programadmin/	<b>29</b> /12

Code	Title	Hours
<u>BIOE 460</u>	Gene Editing Lab	3
<u>BIOE 477</u>	Imaging and Therapeutic Probes	3
<u>BIOE 479</u>	Cancer Nanotechnology	3
<u>BIOE 498</u>	Special Topics (Preclinical Molecular Imaging)	3
<u>CHBE 472</u>	Techniques in Biomolecular Eng	3
<u>ECE 481</u>	Nanotechnology	4
<u>MSE 403</u>	Synthesis of Materials	3
<u>MSE 404</u>	Laboratory Studies in Materials Science and Engineering	1.5
<u>MSE 450</u>	Polymer Science & Engineering	3
<u>MSE 470</u>	Design and Use of Biomaterials	3
<u>MSE 473</u>	Biomolecular Materials Science	3
<u>MSE 474</u>	Biomaterials and Nanomedicine	3
<u>MSE 480</u>	Surfaces and Colloids	3
<u>TMGT 461</u>	Tech, Eng, & Mgt Final Project	2
Computat	ional and Systems Biology Track	
<u>CS 101</u>	Intro Computing: Engrg & Sci ( <u>CS 125</u> may be taken instead of <u>CS 101</u> . Student	3
	must complete curriculum modification form with department advisor)	
<u>ABE 440</u>	Applied Statistical Methods I	4
<u>BIOE 424</u>	Modeling for Angiogenesis	3
<u>BIOE 430</u>	Intro Synthetic Biology	3
<u>BIOE 498</u>	Special Topics (Finite Element Methods in Biomedicine)	3
<u>CS 225</u>	Data Structures	4
<u>CS 398</u>	Special Topics (Deep Learning)	3
<u>CS 411</u>	Database Systems	3
<u>CS 412</u>	Introduction to Data Mining	3
<u>CS 440</u>	Artificial Intelligence	3
<u>CS 465</u>	User Interface Design	3
<u>CS 466</u>	Introduction to Bioinformatics	3
<u>ECE 490</u>	Introduction to Optimization	3
<u>IE 310</u>	Deterministic Models in Optimization	3
<u>IE 370</u>	Stochastic Processes and Applications	3
<u>NPRE 498</u>	Special Topics (Advanced Risk Analysis)	3
<u>SE 423</u>	Mechatronics	3
<u>TMGT 461</u>	Tech, Eng, & Mgt Final Project	2
Imaging a	and Sensing	
<u>ECE 210</u>	Analog Signal Processing	4
<u>ECE 329</u>	Fields and Waves I	3
and select	t remaining hours from:	
<u>BIOE 477</u>	Imaging and Therapeutic Probes	3
<u>BIOE 498</u>	Special Topics (Surgical Techniques)	3
<u>BIOE 498</u>	Special Topics (Preclinical Molecular Imaging)	3
<u>ECE 310</u>	Digital Signal Processing	3
<u>ECE 311</u>	Digital Signal Processing Lab	1
<u>ECE 380</u>	Biomedical Imaging	3
<u>ECE 416</u>	Biosensors	3
		3 <mark>0</mark>
ttps://nextcourse	es.illinois.edu/programadmin/	10/12

11/15/2019	Program Management	
Code Title		Hours
ECE 460 Optical Imaging		4
ECE 467 Biophotonics		3
ECE 473 Fund of Engrg Ac	oustics	3
ECE 480 Magnetic Resonal	nce Imaging	3
ME 487 MEMS-NEMS The	ory & Fabrication	4
NPRE 498 Special Topics (Ad	dvanced Risk Analysis)	3
SE 423 Mechatronics		3
TMGT 461 Tech, Eng, & Mgt	Final Project	2
Recommended Free Elective	5	
CHEM 442 Physical Chemistr	ry I	4
General Education I	Requirements	
	Course List	
Code	Title	Hours
A minimum of six courses is	s required, as follows:	18
Social and Behavioral Scien	ces	6
Humanities & the Arts		6
The Grainger College of Eng	jineering Liberal Education course list, or from the campus General	6
Education lists for Social an	d Behavioral Sciences or Humanities and the Arts	
Cultural Studies: Non-Weste	ern Cultures (1 course)	
Cultural Studies: U.S. Minor	rities Cultures (1 course)	
Cultural Studies: Western/C	Comparative Cultures (1 course)	
Non-Primary Langu	age Reguirement	
, 3	Course List	
Code	Title	Hours
Completion of the third sem	nester or equivalent of a non-primary language is required.	0-9
	of a single language in high school satisfies this requirement.	
University Composi	tion	
, , ,	nentals of expository writing.	
mese courses teach fundar	Course List	
Code	Title	Hours
Choose one:	THE	4-6
<u>RHET 105</u>	Writing and Research	70
<u>CMN 111</u>	Oral & Written Comm I	
& <u>CMN 112</u>	and Oral & Written Comm II	
<u>ESL 111</u>	Intro to Academic Writing I	
& <u>ESL 112</u>	and Intro to Academic Writing II	
<u>ESL 115</u>	Principles of Academic Writing	
	be satisfied by completing a course in either the liberal education	
	which has the Advanced Composition designation.	
Free Electives		
TIEE LIECUVES	Courses List	
Cada	Course List	House
Code	Title	Hours
Free Electives		

Program Management

Hours
ted by 8
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legree.
ective

# **EP** Documentation

Attach Rollback/Approval Notices

## **DMI** Documentation

Attach Final Approval Notices

Attached Document

Justification for this request

Program Reviewer Comments **Kathy Martensen (kmartens) (11/15/19 8:28 am):** Admin approval: Does not change total # of hrs. req'd; does not restrict options for students.

Key: 112

**32** 

Key	1		
GREEN HIGHLIGHT = Course addition or updated hours RED HIGHLIGHT = Course has been removed due to it no longer being offered to on-campus students.			
Current Requirement	Current Hours	Revised Requirements	Revised Hours
Orientation and Professional Development	1	Orientation and Professional Development ENG 100: Engineering Orientation	2
ENG 100: Engineering Orientation	0	BIOE 100: Bioengineering Freshmen Seminar	1
BIOE 120: Introduction to Bioengineering	1	BIOE 120: Introduction to Bioengineering	1
Foundational Mathematics and Science	30	Foundational Mathematics and Science	30
CHEM 102: General Chemistry I	3	CHEM 102: General Chemistry I	3
CHEM 103: General Chemistry Lab I CHEM 104: General Chemistry II	3	CHEM 103: General Chemistry Lab I CHEM 104: General Chemistry II	3
CHEM 105: General Chemistry Lab II	1	CHEM 105: General Chemistry Lab II	1
MATH 221: Calculus I 1 MATH 231: Calculus II	3	MATH 221: Calculus I 1 MATH 231: Calculus II	3
MATH 241: Calculus III	4	MATH 241: Calculus III	4
MATH 285: Intro Differential Equations PHYS 211: University Physics: Mechanics	3	MATH 285: Intro Differential Equations PHYS 211: University Physics: Mechanics	3
PHYS 211: University Physics: Nechanics PHYS 212: University Physics: Elec & Mag	4	PHYS 212: University Physics: Nechanics PHYS 212: University Physics: Elec & Mag	4
Bioengineering Technical Core BIOE 201: Conservation Principles Bioeng	3	Bioengineering Technical Core BIOE 201: Conservation Principles Bioeng	3
BIOE 202: Cell & Tissue Engineering Lab	2	BIOE 202: Cell & Tissue Engineering Lab	2
BIOE 205: Signals & Systems in Bioengrg BIOE 206: Cellular Bioengineering	3	BIOE 205: Signals & Systems in Bioengrg BIOE 206: Cellular Bioengineering	3
DOL 200. Commi Doorgineering	-	BIOE 210: Linear Algebra for Biomedical Data Science	3
BIOE 220: Bioenergetics BIOE 201: Internet and an internet an internet and an internet an internet and an internet an internet and an internet an internet and an internet an	3	BIOE 220: Bioenergetics	3
BIOE 301: Introductory Biomechanics BIOE 302: Modeling Human Physiology	3	BIOE 302: Modeling Human Physiology	3
BIOE 303: Quantitative Physiology Lab	2	BIOE 303: Quantitative Physiology Lab	2
BIOE 310: Comp Tools Bio Data BIOE 360: Transport & Flow in Bioengrg	3	BIOE 310: Comp Tools Bio Data BIOE 360: Transport & Flow in Bioengrg	3 3
BIOE 414: Biomedical Instrumentation	3	BIOE 414: Biomedical Instrumentation	3
BIOE 415: Biomedical Instrumentation Lab BIOE 420: Intro Bio Control Systems	2	BIOE 415: Biomedical Instrumentation Lab BIOE 420: Intro Bio Control Systems	2
BIOE 420: Intro Bio Control Systems BIOE 435: Senior Design I	2	BIOE 420: Intro Bio Control Systems BIOE 435: Senior Design I	2
BIOE 436: Senior Design II	2	BIOE 436: Senior Design II	2
BIOE 476: Tissue Engineering CHEM 232: Elementary Organic Chemistry I 2	4	BIOE 476: Tissue Engineering CHEM 232: Elementary Organic Chemistry I 2	5 4
CS 101: Intro Computing: Engrg & Sci	3	CS 101: Intro Computing: Engrg & Sci	3
MCB 150: Molec & Cellular Basis of Life	4	MCB 150: Molec & Cellular Basis of Life	4
Track Electives	15	Track Electives	15
Biomechanics Track		Biomechanics Track	
List of Pre-Approved Biomechanics Track Required Courses TAM 211: Statics	3	List of Pre-Approved Biomechanics Track Required Courses TAM 211: Statics	3
TAM 212: Introductory Dynamics	3	TAM 212: Introductory Dynamics	3
TAM 251: Introductory Solid Mechanics List of Pre-Approved Biomechanics Electives to choose remaining hours from::	3	TAM 251: Introductory Solid Mechanics List of Pre-Approved Biomechanics Electives to choose remaining hours from::	3
BIOE 461: Cellular Biomechanics	4	BIOE 461: Cellular Biomechanics	4
BIOE 498: Special Topics (Surgical Techniques ) BIOE 498: Special Topics (Finite Element Methods in Biomedicine)	3	BIOE 498: Special Topics (Surgical Techniques ) BIOE 498: Special Topics (Finite Element Methods in Biomedicine)	3
ME 330: Engineering Materials	4	ME 330: Engineering Materials	4
ME 481: Whole-Body Musculoskel Biomech	3	ME 481: Whole-Body Musculoskel Biomech	3
ME 482: Musculoskel Tissue Mechanics ME 483: Mechanobiology	3	ME 482: Musculoskel Tissue Mechanics	3
	4	ME 483: Mechanobiology	4
NPRE 498: Special Topics (Advanced Risk Analysis)	3	ME 483: Mechanobiology NPRE 498: Special Topics (Advanced Risk Analysis)	4 3
NPRE 498: Special Topics (Advanced Risk Analysis) SE 402: Comp-Aided Product Realization	4 3 3 3	NPRE 498: Special Topics (Advanced Risk Analysis) SE 402: Comp-Aided Product Realization	4 3 3 3
NPRE 498: Special Topics (Advanced Risk Analysis) SE 402: Comp-Aided Product Realization SE 423: Mochartonics TAM 445: Continuum Mechanics	4 3 3 3 4	NPRE 498: Special Topics (Advanced Risk Analysis) SE 402: Comp-Aided Product Realization SE 423: Mechatonics TAM 445: Continuum Mechanics	4 3 3 3 4
NPRE 498: Special Topics (Advanced Risk Analysis) SE 402: Comp-Aided Product Realization SE 423: Mechatronics TAM 445: Continuum Mechanics TMGT 461: Tech, Eng, & Mgt Final Project	4 3 3 3 4 2	NPRE 498: Special Topics (Advanced Risk Analysis) SE 402: Comp-Aided Product Realization SE 423: Mechatronics TAM 445: Continuum Mechanics TMGT 461: Tech, Eng, & Mgt Final Project	4 3 3 4 2
NPRE 498: Special Topics (Advanced Risk Analysis) SE 402: Comp-Aided Product Realization SE 423: Mochartonics TAM 445: Continuum Mechanics	4 3 3 3 4 2 3 3	NPRE 498: Special Topics (Advanced Risk Analysis) SE 402: Comp-Aided Product Realization SE 423: Mechatonics TAM 445: Continuum Mechanics	4 3 3 4 2 3 3
NPRE 498: Special Topics (Advanced Rek Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TMGT 461: Toeh, Fing, & Mg Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design	4 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4	NPRE 498: Special Topics (Advanced Risk Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng. & May Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design	4 3 3 4 2 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mochatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech, Eng, & Mgt Final Project         Pre-Approved Biomechanics Track recommended free elective;	4 3 3 3 3 3 4 4 4 5 2 5 1 4 4 5 1 5 1 4 4 5 1 5 1 4 5 1 5 1 5	NPBE 498: Special Topics (Advanced Risk Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng, & Mgt Final Project           Pre-Approved Biomechanics Track recommended free elective;	4 3 3 4 2 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mochatronics         TAM 445: Continuum Mechanics         TMGT 641: Feah, Fan, & Mg Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 306: Biofabrication Lab         BIOE 416: Biosensors	4 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4	NPRE 498: Special Topics (Advanced Risk Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. & Mug Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Call and Tissue Engineering Track           BIOE 316: Biosensors	4 3 3 4 2 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mochatonics         TAM 445: Continuum Mechanics         TMGT 461: Tech, Eng, & Mgt Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE: 306: Biofabrication Lab         BIOE: 342: Modeling for Angiogenesis	4 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3	NPEE 498: Special Topics (Advanced Risk Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMG 461: Tech, Eng, & Mgt Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 300: Biodabrication Lab           BIOE 424: Medeling for Anglogenesis	4 3 3 4 2 2 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mochatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech. Eng. & Mgt Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 306: Biofabrication Lab         BIDE 416: Biosensons         BIDE 424: Modeling for Angiogenesis         BIDE 430: Inro Synthetic Biology         BIDE 406: Gene Editing Lab	4 3 3 4 2 3 3 3 3 3 3 3 3 3 3 3 3 3	NPRE 498: Special Topics (Advanced Risk Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. & Mg Kinal Project           Prc-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 106: Biosensors           BIOE 424: Modeling for Angiogenesis           BIOE 430: Conce Edring Lab	4 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mochatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech, Eng, & Mgt Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 306: Biofabrication Lab         BIOE 416: Biosensors         BIOE 424: Modeling for Angiogenesis         BIOE 430: Intro Synthetic Biology         BIOE 440: Cane Editing Lab         BIOE 440: Cane Editing Lab	4 3 3 4 2 2 3 3 3 3 3 3 3 3 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3	NPEE 498: Special Topics (Advanced Risk Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatomics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng, & Mgt Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 306: Biofabrication Lab           BIOE 416: Biosensore           BIOE 424: Modeling for Analogenesis           BIOE 424: Modeling Lab           BIOE 461: Cellular Bionechanics	4 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mochatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng, & Mgt Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Dosign           Cell and Tissue Engineering Track           BIOE 306: Biofabrication Lab           BIOE 416: Biooresnors           BIOE 424: Modeling for Angiogenesis           BIOE 416: Gene Editing Lab           BIOE 416: Cellular Biomechanics           BIOE 446: Sen Cell Bioengineering           BIOE 447: Cellular Biomechanics           BIOE 446: Sen Cell Bioengineering           BIOE 447: Cellular Biomechanics           BIOE 446: Sen Cell Bioengineering	4 3 3 3 4 2 2 3 3 3 3 3 3 3 4 4 3 3 3 3 3 4 3 3 3 3 3 3 3 3 3 3 3 3 3	NPRE 498: Special Topics (Advanced Risk Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng, & Mgt Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 106: Bioenspors           BIOE 410: Biosensors           BIOE 424: Modeling for Angiogenesis           BIOE 400: Gene Editing Lab           BIOE 461: Cente Biomechanics           BIOE 487: Stem Cell Biomechanics           BIOE 487: Sepcial Topics (Finite Element Methods in Biomedicine)	4 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mochatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech, Eng, & Mgt Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 306: Biofabrication Lab         BIOE 416: Biosensors         BIOE 430: Modeling for Angiogenesis         BIOE 430: Intro Synthetic Biology         BIOE 440: Conc Editing Lab         BIOE 440: Clular Biomechanics         BIOE 430: Steerial Final Final Project         CHB 416: Cellular Biomechanics         BIOE 437: Stem Cell Bioengineering         BIOE 439: Special Topics (Finite Element Methods in Biomedicine)         CHB 471: Biochernikal Engineering	4 3 3 3 4 2 3 3 3 3 3 3 3 3 3 3 3 3 3	NPEE 498: Special Topics (Advanced Reik Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMG 74 61: Tech, Eng, & Mgt Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 306: Biodebrication Lab           BIOE 416: Biosensors           BIOE 424: Modeling for Angiogenesis           BIOE 424: Modeling for Angiogenesis           BIOE 461: Cellular Biomechanics           BIOE 461: Cellular Biomechanics           BIOE 481: Cellular Biomechanics           BIOE 491: Cellular Biomechanics           BIOE 491: Cellular Biomechanics           BIOE 471: Cellular Biomechanics           BIOE 471: Biochemical Engineering           CHBE 471: Biochemical Engineering	4 3 3 4 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mochatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng, & Mgt Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Dosign           Cell and Tissue Engineering Track           BIOE 306: Biofabrication Lab           BIOE 416: Biooresnors           BIOE 424: Modeling for Angiogenesis           BIOE 416: Gene Editing Lab           BIOE 416: Cellular Biomechanics           BIOE 446: Sen Cell Bioengineering           BIOE 447: Cellular Biomechanics           BIOE 446: Sen Cell Bioengineering           BIOE 447: Cellular Biomechanics           BIOE 446: Sen Cell Bioengineering	4 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	NPEE 498: Special Topics (Advanced Reik Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMG 7461: Tech, Eng, & Mgt Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 306: Biosensors           BIOE 416: Biosensors           BIOE 424: Modeling for Angiogenesis           BIOE 426: Concer Eduits Lab           BIOE 426: Concer Eduits Lab           BIOE 446: Concer Eduits Lab           BIOE 447: Special Topics (Thite Element Methods in Biomedicine)           CHB 471: Biochemical Engineering           BIOE 487: Special Topics (Thite Element Methods in Biomedicine)           CHBE 471: Biochemical Engineering           E130: Endustrial Quality Control	4 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Reak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech, Ing., & Mg Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIDE 30: 6: Biodafrication Lab         BIDE 416: Biosensors         BIOE 40: Gene Editing Lab         BIOE 40: Gene Editing Lab         BIOE 446: Cellular Biomechanics         BIOE 446: Topics (Finite Element Methods in Biomedicine)         CHB 471: Technigneering         BIOE 498: Special Topics (Finite Element Methods in Biomedicine)         CHB 471: Technignees in Biomolecular Eng         IE 40: 41: Laboratory Studies in Materials Science and Engineering	4 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng. & Mg H Find Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOD 506: Sindshrization Lab           BIOE 424: Modeling for Angiogenesis           BIOE 424: Modeling for Angiogenesis           BIOE 430: Start Cellular Biomechanics           BIOE 442: Stem Cell Biomechanics           BIOE 443: Stem Cellular Biomechanics           BIOE 443: Stem Cellular Biomechanics           BIOE 443: Stem Cellular Biomechanics           BIOE 443: The Synthetic Biology           BIOE 443: Stem Cellular Biomechanics           BIOE 443: Stem Cellular Biomechanics           BIOE 444: Cellular Biomechanics           BIOE 445: Techniques in Biomelecule Eng           CHB 471: Enchemical Engineering           BIOE 498: Special Topics (Finite Element Methods in Biomedicine)           CHBE 472: Techniques in Biomelecule Eng           CHB 471: Biochemical Engineering           BIOE 4941: Laboratory Studies in Materiak Science and Engineering           WSE 4041: Laboratory Studies in Materiak Science and Engineering	4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mochatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng, & Mgt Final Project <b>Pre-Approved Biomechanics Track recommended free elective:</b> SE 101: Engineering Graphics & Dosign <b>Cell and Tissue Engineering Track</b> BIOE 306: Biofabrication Lab           BIOE 416: Gone Editing Lab           BIOE 416: Gone Editing Lab           BIOE 416: Gone Editing Lab           BIOE 416: Context Elisoering           BIOE 416: Sendering Finite Element Methods in Biomedicine)           CHBE 472: Eccharigues in Biomolecular Eng           EIOE 416: Techniques in Biomecharing           BIOE 416: Industrial Quality Control	4 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	NPEE 498: Special Topics (Advanced Reik Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMG 7461: Tech, Eng, & Mgt Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 306: Biosensors           BIOE 416: Biosensors           BIOE 424: Modeling for Angiogenesis           BIOE 426: Concer Eduits Lab           BIOE 426: Concer Eduits Lab           BIOE 446: Concer Eduits Lab           BIOE 447: Special Topics (Thite Element Methods in Biomedicine)           CHB 471: Biochemical Engineering           BIOE 487: Special Topics (Thite Element Methods in Biomedicine)           CHBE 471: Biochemical Engineering           E130: Endustrial Quality Control	4 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Reak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech. Eng., & Mg. Mg Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 161: Biodavication Lab         BIOE 161: Biodavication Lab         BIOE 141: Biodavication Lab         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 407: Send Cell Bioengineering         BIOE 408: Cellung Lab         BIOE 407: Send Cell Bioengineering         BIOE 408: Longo Special Topics (Finite Element Methods in Biomedicine)         BIOE 407: Teschniques in Biomolecular Eng         CHBE 472: Teschniques in Biomolecular Eng         E 302: Industrial Quality Centrol         MSE 404: Lonboratory Studies in Materials Science and Engineering         MSE 470: Lonboratios Biomaterials and Nanomedicine         MSE 474: Biomaterials and Nanomedicine	4 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. & Mg. Bay Eind Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOC 306: Biofabrication Lab           BIOC 416: Biosensors           BIOC 416: Biosensors           BIOC 424: Modeling for Angiogenesis           BIOC 406: Special Topics (Finite Element Methods in Biomedicine)           CHE 471: Tescherning & Mgineering           BIOE 498: Special Topics (Finite Element Methods in Biomedicine)           CHE 472: Techniques in Biomolecular Eng           IE 430: Hooltstrial Quality Control           MSE 440: Laboratry Studies in Materials Science and Engineering           MSE 440: Laboratry Studies in Materials Science and Engineering           MSE 4474: Biomaterials and Nanomedicine           MSE 4748: Momaterials and Nanomedicine           MSE 4748: Momaterials and Nanomedicine           MSE 4748: Biomaterials and Nanomedicine           MSE 4748: Biomaterials and Nanomedicine           MSE 4748: Biomaterials and Nanomedicine	4 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mochatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech, Eng, & Mgt Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOR 306: Biodabrication Lab         BIOR 416: Biosensors         BIOR 424: Modeling for Angiogenesis         BIOR 446: Biosensors         BIOR 446: Gene Editing Lab         BIOR 446: Cene Editing Lab         BIOR 446: Technical Engineering         CHB 472: Techniques, Biomochanics         BIOR 446: Design and Use of finite Element Methods in Biomedicine)         CHB 472: Design and Use of Biomaterials         BIOE 498: Special Topics (Finite Element Methods in Biomedicine)         CHB 472: Design and Use of Biomaterials         MEX 470: Design and Use of Biomaterials         MEX 470: Design and Use of Biomaterials         MEX 474: Biomechanical Engineering         MEX 474: Biomaterials and Nanomedicine         MEX 474: Biomaterials and Nanomedicine         MEX 470: Design and Use of Biomaterials         MEX 470: Design and Use of Biomaterials         MEX 470: Design and Use of Biomaterials         M	4       3       3       4       2       3       2       3       4       2       4	NPRE 498: Special Topics (Advanced Risk Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng, & Mgt Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 100: Biosensors           BIOE 401: Biosensors           BIOE 402: Modeling for Angiogenesis           BIOE 402: Stand Education Lab           BIOE 403: Cente Eduing Lab           BIOE 404: Stand Educations           BIOE 404: Stand Educations           BIOE 405: Stand Educations           BIOE 406: Cente Editing Lab           BIOE 406: Cente Editing Lab           BIOE 406: Cente Editing Lab           BIOE 407: Cente Editing Lab           BIOE 408: Special Topics ( Finite Element Methods in Biomedicine)           CHBE 472: Techniques in Biomolecular Eng           IE 330: Industrial Quality Control           MSE 470: Design and Use of Biomaterials           MSE 470: Design and Use of Biomaterials           MSE 474: Biomanebiology           MSE 474: Biomanebiology           MSE 474: Biomanebiology           MSE 474: Biomanebiology           MSE 474: Biomanebiolog	4 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Reak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech. Eng., & Mg. Mg Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 161: Biodavication Lab         BIOE 161: Biodavication Lab         BIOE 141: Biodavication Lab         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 407: Send Cell Bioengineering         BIOE 408: Cellung Lab         BIOE 407: Send Cell Bioengineering         BIOE 408: Longo Special Topics (Finite Element Methods in Biomedicine)         BIOE 407: Teschniques in Biomolecular Eng         CHBE 472: Teschniques in Biomolecular Eng         E 302: Industrial Quality Centrol         MSE 404: Lonboratory Studies in Materials Science and Engineering         MSE 470: Lonboratios Biomaterials and Nanomedicine         MSE 474: Biomaterials and Nanomedicine	4       3       3       3       4       2       3       4       2       3       3       3       3	NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. & Mg. Bay Eind Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOC 306: Biofabrication Lab           BIOC 416: Biosensors           BIOC 416: Biosensors           BIOC 424: Modeling for Angiogenesis           BIOC 406: Special Topics (Finite Element Methods in Biomedicine)           CHE 471: Tescherning & Mgineering           BIOE 498: Special Topics (Finite Element Methods in Biomedicine)           CHE 472: Techniques in Biomolecular Eng           IE 430: Hooltstrial Quality Control           MSE 440: Laboratry Studies in Materials Science and Engineering           MSE 440: Laboratry Studies in Materials Science and Engineering           MSE 4474: Biomaterials and Nanomedicine           MSE 4748: Momaterials and Nanomedicine           MSE 4748: Momaterials and Nanomedicine           MSE 4748: Biomaterials and Nanomedicine           MSE 4748: Biomaterials and Nanomedicine           MSE 4748: Biomaterials and Nanomedicine	4 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mochatonics         TAM 445: Continuum Mechanics         TMGT 461: Tech, Eng, & Mgt Final Project <b>Pre-Approved Biomechanics Track recommended free elective:</b> SE 101: Engineering Graphics & Dosign <b>Cell and Tissue Engineering Track</b> BIOE 306: Biofabrication Lab         BIOE 416: Biosensons         BIOE 424: Modeling for Angiogenesis         BIOE 406: Gene Editing Lab         BIOE 406: Gene Editing Lab         BIOE 446: Gene Editing Lab         BIOE 447: Elemential Engineering         CHB 471: Biosensons         BIOE 446: Disconsidering         BIOE 446: Disconsidering         BIOE 446: Cellular Biomechanics         BIOE 446: Cellular Biomechanics         BIOE 446: Cellular Biomechanics         BIOE 447: Edition Cell Bioengineering         BIOE 447: Standical Engineering         CHB 472: Biochennical Engineering         GHE 472: Design and Use of Biomaterials         ME 470: Discign and Use of Biomaterials         MES 471: Discign and Use of Biomaterials         MES 474: Biomaterials and Nanomedicine         ME 475: Deschanobiology         MES 474: Biomaterials and Nanomedicine	4       3       3       3       2       3       2       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       4       2       3       3       4       2       3       3	NPRE 498: Special Topics (Advanced Reik Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng, & Mgt Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 100: Bioenshora           BIOE 401: Biosensors           BIOE 402: Modeling for Angiogenesis           BIOE 402: Some Edition Lab           BIOE 403: Somethic Biosensors           BIOE 404: Cell Michael Bioregineering           BIOE 405: Some Editing Lab           BIOE 406: Some Editing Lab           BIOE 406: Cente Editing Lab           BIOE 407: Cell Michael Bioregineering           CHB 472: Techniques in Biomolecular Eng           EI 300: Industrial Quality Control           MSE 470: Design and Use of Biomaterials           MSE 474: Biomanelia and Nanomedicine           ME 433: Mechanobiology           MI 434: Mechanobiology           <	4 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Reak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech, Ing., & Mg Hinal Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 30: 6: Biofabrication Lab         BIOE 416: Biosensors         BIOE 40: Cellular Biomechanics         BIOE 40: Cellular Biomechanics         BIOE 43: Modeling for Angiogenesis         BIOE 44: Cellular Biomechanics         BIOE 44: Topics (Trinte Element Methods in Biomedicine)         CHB 471: Biodernical Engineering         BIOE 498: Special Topics (Trinte Element Methods in Biomedicine)         CHB 472: Techniques in Biomolecular Eng         CHB 472: Techniques in Biomolecular Eng         IE 330: Industrial Quality Control         MSE 494: Laboratory Studies in Materials Science and Engineering         MSE 494: Laboratory Studies in Matorials         MSE 494: Laboratory Studies in Matorials         MSE 494: Laboratory Studies in Matorials Science and Engineering         MSE 494: Laboratory Studies in Matorials Science and Engineering         MSE 494: Laboratory Studies in Matorials Science and Engineering         MSE 494: Laboratory Studies i	4       3       3       3       4       2       3       4       2       3       3       3       3       3       3       3       3       3       3       3       3       3	NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TAK 445: Tech. Eng. & Mg H Find Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 306: Biofabrication Lab           BIOE 424: Modeling for Angiogenesis           BIOE 424: Modeling for Angiogenesis           BIOE 430: Sendering Lab           BIOE 441: Cellular Biomechanics           BIOE 442: Stem Cell Bioengineering           BIOE 443: Stem Cell Bioengineering           BIOE 444: Cellular Biomechanics           BIOE 445: Stem Cell Bioengineering           BIOE 445: Cellular Biomachanics           BIOE 445: Stem Cellular Biomachanics           BIOE 445: Stem Cellular Biomachanics           BIOE 445: Cellular Biomachanics           BIOE 445: Stem Cellular Biomachanics           BIOE 445: Stem Cellular Biomachanics           BIOE 445: Stem Cellular Biomachanics           BIOE 445: Laboratory Studies in Materials Science and Engineering	4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Reak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech, Ing., & Mg Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 30: 6: Biofabrication Lab         BIOE 416: Biosensors         BIOE 416: Callaar Biomechanics         BIOE 446: Callaar Biomechanics         BIOE 446: Callaar Biomechanics         BIOE 446: Callaar Biomechanics         BIOE 446: Callaar Biomechanics         BIOE 447: Stem Cell Bioengineering         BIOE 446: Callaar Biomechanics         BIOE 447: Techningse in Biomolecular Eng         CHB 471: Biochemical Engineering         BIOE 447: Stem Cell Biomechanics         BIOE 447: Stem Cell Biomechanics         BIOE 448: Abortard Vaulity Control         CHB 471: Techningse in Biomolecular Eng         CHB 471: Biochemical Engineering         MSE 447: Biomatrial Anal Manomedicine         MSE 447: Biomatrial Manomedicine         MSE 447: Biomatrial Manomedicine         MSE 447: Biomatrial Manomedicine         MSE 447: Biomatrial Manomedicine         MSE 447: Biomaterial Marin	4       3       3       3       4       2       3	NPRE 498: Special Topics (Advanced Realization           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAGT 461: Tech, Eng. & Mg H Find Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOB 306: Biofabrication Lab           BIOE 424: Modeling for Angiogenesis           BIOE 430: Sinofsynation           BIOE 443: Cellular Biomechanics           BIOE 444: Cellular Biomechanics           BIOE 445: Seen Cell Bioengineering           BIOE 446: Cellular Biomechanics           BIOE 447: Seen Cell Bioengineering           BIOE 448: Special Topics (Finite Element Methods in Biomedicine)           CHBE 471: Enbernical Engineering           BIOE 449: Showing Cellular Biomelacular Eng           IE 330: Industrial Quality Control           MSE 470: Design and Use of Biomaterials           MSE 474: Biomaterials and Anomedicine           ME 474: Biomaterials and Anomedicine           ME 474: Biomaterial and Anomedicine           ME 433: Mechanology           Thorapeutics Engineering Track           Recommended Free Elective:           MCE 450: Introduc	4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatomics         TAM 445: Continuum Mechanics         TMGT 461: Tech. Eng. & Mg Birnla Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 161: Biodabrication Lab         BIOE 161: Biodabrication Lab         BIOE 161: Biodabrication Lab         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 410: Long Synthetis Biology         BIOE 425: Stem Cell Biosenjaneering         BIOE 406: Cene Editing Lab         BIOE 407: Stem Cell Biosenjaneering         BIOE 407: Stem Cell Biosenjaneering         BIOE 408: Loboration Elengineering         CHBE 472: Techniques in Biomolecular Eng         CHBE 472: Techniques in Biomolecular Eng         CHBE 472: Techniques in Materials Science and Engineering         MSE 404: Loboratory Stutice ins in Materials Science and Engineering         MSE 470: Loboratory Stutice ins in Materials Science and Engineering         MSE 474: Biomaterials and Nanomedicine         MCB 435: Introductory Biochemistry         Therapeutics Engineering Track         ABE 446: Biologica	4       3       3       3       2       3       2       3	NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng. & Mg El Finl Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOC 306: Biofabrication Lab           BIOE 416: Biosefination Lab           BIOE 416: Biosefination Lab           BIOE 416: Biosefination Lab           BIOE 424: Modeling for Angiogenesis           BIOE 425: Stem Cell Bionegineering           BIOE 426: Stem Cell Bionegineering           BIOE 427: Techniques in Biology           BIOE 428: Special Topics (Finite Element Methods in Biomedicine)           CHBE 471: Elechnique Engineering           BIOE 470: Special Coll Biomegineering           BIOE 472: Techniques in Biomolecular Eng           E 430: Industrial Quality Control           MSE 470: Design and Use of Biomaterials           MSE 470: Design and Use of Biomaterials           MSE 474: Biomaterials and Nanomedicine           ME 433: Mechanobiology           TIME 471: Techniques I Project           Recommendeed Free Elective:           MCB 450: Introductory Biochemistry           Thera	4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
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NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech. Eng. & Mg Hinal Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 306: Biofabrication Lab         BIOE 416: Biosestration Lab         BIOE 416: Biosestration Lab         BIOE 416: Biosenstors         BIOE 416: Biosenstors         BIOE 416: Biosenstors         BIOE 416: Stresserstors         BIOE 427: Modeling for Angiogenesis         BIOE 416: Stresserstors         BIOE 428: Special Topics (Finite Elenent Methods in Biomedicine)         BIOE 439: Special Topics (Finite Elenent Methods in Biomedicine)         CHBE 472: Techniques in Biomolecular Eng         E 330: Industrial Quality Control         MSE 494: Loboratory Stuticis is in Materiala Science and Engineering         MSE 474: Biomaterials and Nanomeckine         MEE 470: Loboratory Stuticis is in Materiala Science and Engineering         MSE 474: Biomaterials and Nanomeckine         ME 432: Mechanobiology         TMCT 461: Tech. Elective:         Commended Free Elective:         ABE 446: Biological Nanoen	4       3       3       3       4       2       3 <t< td=""><td>NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. &amp; Mgt Final Project           <b>Pre-Approved Biomechanics Track recommended free elective:</b>           SE 101: Engineering Graphics &amp; Design           <b>Cell and Tissue Engineering Track</b>           BIOE 416: Biosefance Track           BIOE 416: Biosefance Track           BIOE 416: Biosemsors           BIOE 416: Biosemsors           BIOE 424: Modeling for Angiogenesis           BIOE 416: Storemsors           BIOE 425: Sencel 21 Biosefineering           BIOE 425: Sencel 21 Biosefineering           BIOE 426: Sence Editing Lab           BIOE 437: Sencel 21 Biosefineering           BIOE 447: Sencel 21 Biosefineering           BIOE 427: Celmiques in Biomolecular Eng           BIOE 428: Special Topics (Finite Element Methods in Biomedicine)           CHBE 472: Techniques in Biomolecular Eng           BIOE 472: Techniques in Biomolecular Eng           BIOE 472: Techniques in Biomolecular Eng           BIOE 473: Enchambiology           MSE 474: Elooratory Stuticis in Materials Science and Engineering           MSE 474: Elooratoris Muchatrials and Nanomedicine           ME 433: Mechanobiology</td><td>4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3</td></t<>	NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. & Mgt Final Project <b>Pre-Approved Biomechanics Track recommended free elective:</b> SE 101: Engineering Graphics & Design <b>Cell and Tissue Engineering Track</b> BIOE 416: Biosefance Track           BIOE 416: Biosefance Track           BIOE 416: Biosemsors           BIOE 416: Biosemsors           BIOE 424: Modeling for Angiogenesis           BIOE 416: Storemsors           BIOE 425: Sencel 21 Biosefineering           BIOE 425: Sencel 21 Biosefineering           BIOE 426: Sence Editing Lab           BIOE 437: Sencel 21 Biosefineering           BIOE 447: Sencel 21 Biosefineering           BIOE 427: Celmiques in Biomolecular Eng           BIOE 428: Special Topics (Finite Element Methods in Biomedicine)           CHBE 472: Techniques in Biomolecular Eng           BIOE 472: Techniques in Biomolecular Eng           BIOE 472: Techniques in Biomolecular Eng           BIOE 473: Enchambiology           MSE 474: Elooratory Stuticis in Materials Science and Engineering           MSE 474: Elooratoris Muchatrials and Nanomedicine           ME 433: Mechanobiology	4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Ing., & Mg Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 30: Engineering Track           BIOE 30: Engineering Track           BIOE 416: Biosensors           BIOE 441: Giagneering for Angiogenesis           BIOE 441: Biosensors           BIOE 444: Modeling for Angiogenesis           BIOE 445: Stem Cell Biomechanics           BIOE 446: Cellular Biomechanics           BIOE 447: Stem Cell Bioengineering           BIOE 448: Special Topics (Finite Element Methods in Biomedicine)           CHB 471: Techniques in Biomolecular Eng           E 330: Industrial Quality Control           MSE 494: Laboratory Studies in Materials Science and Engineering           MSE 494: Laboratory Studies in Materials Science and Engineering           MSE 494: Laboratory Studies in Materials Science and Engineering           MSE 494: Laboratory Studies in Materials Science and Engineering           MSE 494: Laboratory Studies in Materials Science and Engineering           MSE 495: Introductory Biochemistry           Therap	4       3       3       3       3       2       3       2       3	NPRE 498: Special Topics (Advanced Realization           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAK 74 61: Tech, Eng. & Mg H Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOD 506: Sindbrication Lab           BIOE 424: Modeling for Angiogenesis           BIOE 446: Sindbrication Element Methods in Biomedicine)           BIOE 450: Element methods in Biomedicine)           BIOE 450: Element methods in Biomedicine)           BIOE 451: Element methods in Biomedicine)           CHBE 471: Elemental Engineering           BIOE 483: Stern Cell Bioengineering           BIOE 498: Special Topics (Finite Element Methods in Biomedicine)           CHBE 471: Elemental Engineering           BIOE 498: Special Topics (Finite Element Methods in Biomedicine)           CHBE 472: Techniques in Biomolecular Eng           BIOE 498: Special Topics (Finite Element Methods in Biomedicine)           CHBE 472: Techniques in Miserials Science and Engineering           MSE 474: Biomaterials and Use of Biomaterials and Materials           MSE 474: Biomaterials and Noncomdicine           ME 474: Biomaterials and Noncomdicine	4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TMGT 461: Fech. Eng. & Mgt Final Project         Pre-Approved Bionechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 306: Biofabrication Lab         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 406: Gene Editing Lab         BIOE 407: Special Topics (Finite Element Methods in Biomedicine)         BIOE 497: Special Topics (Finite Element Methods in Biomedicine)         CHBE 477: Echniques in Biomolecular Eng         EIG 404: Cancel Ading Lab         BIOE 497: Special Topics (Finite Element Methods in Biomedicine)         CHBE 471: Biochemical Engineering         CHBE 472: Techniques in Biomolecular Eng         EIG 300: Industrial Quality Control         MEE 498: Leoratory Studies in Materials Science and Engineering         MEE 490: Leoratory Studies in Materials Science and Engineering         MEE 470: Design and Use of Biomaterials         MEE 470: Leoratory Studies in Materials Science and Engineering         MEE 470: Design and Use of Biomaterials         MEE	4       3       3       3       2       3       2       3 <t< td=""><td>NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. &amp; Mgt Final Project           <b>Pre-Approved Biomechanics Track recommended free elective:</b>           SE 101: Engineering Graphics &amp; Design           <b>Cell and Tissue Engineering Track</b>           BIOE 306: Bioensors           BIOE 416: Bioensors           BIOE 416: Bioensors           BIOE 416: Bioensors           BIOE 424: Modeling for Angiogenesis           BIOE 416: Store Cell Biomechanics           BIOE 416: Store Cell Biomegineering           BIOE 427: Store Cell Bioengineering           BIOE 430: Store Cell Bioengineering           BIOE 441: Store Cell Bioengineering           BIOE 445: Store Cell Bioengineering           MSE 440: Laboratory Stuticis in Materials Science and Engineering           MSE 447: Biomate</td><td>4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3</td></t<>	NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. & Mgt Final Project <b>Pre-Approved Biomechanics Track recommended free elective:</b> SE 101: Engineering Graphics & Design <b>Cell and Tissue Engineering Track</b> BIOE 306: Bioensors           BIOE 416: Bioensors           BIOE 416: Bioensors           BIOE 416: Bioensors           BIOE 424: Modeling for Angiogenesis           BIOE 416: Store Cell Biomechanics           BIOE 416: Store Cell Biomegineering           BIOE 427: Store Cell Bioengineering           BIOE 430: Store Cell Bioengineering           BIOE 441: Store Cell Bioengineering           BIOE 445: Store Cell Bioengineering           MSE 440: Laboratory Stuticis in Materials Science and Engineering           MSE 447: Biomate	4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Reak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech. Eng. & Mg Birnal Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BI0E 30: Engineering Track         BI0E 416: Biosensors         BI0E 416: Biosensors         BI0E 416: Biosensors         BI0E 430: Came Engineering Track         BI0E 430: Came Engineering Track         BI0E 430: Came Engineering Track         BI0E 430: Came Engineering         BI0E 440: Came Engineering         BI0E 440: Came Engineering         BI0E 440: Came Engineering         BI0E 440: Laboratory Stutice Bioorgineering         BI0E 440: Calular Biomechanics         BI0E 441: Eadoennical Engineering         CHB 471: Eadoennical Engineering         MSE 470: Design and Use of Biomaterials         MSE 471: Biometerial and Nanomechicine         ME 443: Mec	4       3       3       3       2       3 <t< td=""><td>NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng. &amp; Mg El Finl Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics &amp; Design           Cell and Tissue Engineering Track           BIOE 306: Biofibrication Lab           BIOE 416: Biosensors           BIOE 424: Modeling for Angiogenesis           BIOE 430: Endocritical Biology           BIOE 440: Endocritical Biology           BIOE 451: Special Topics (Finite Element Methods in Biomedicine)           CHBE 471: Biokernical Engineering           BIOE 483: Special Topics (Finite Element Methods in Biomedicine)           CHBE 471: Enchennical Engineering           BIOE 473: Bioentapics in Biomolecular Eng           CHBE 472: Techniques in Biomolecular Eng           CHBE 472: Techniques in Biomolecular Eng           MSE 494: Laboratory Studies in Materials Science and Engineering           MSE 494: Laboratory Studies in Materials Science and Engineering           MSE 474: Biomaterials and Nanomedicine           MSE 474: Biomaterials and Nanomedicine           MSE 474: Biomaterials and Nanomedicine           MCB 450: Introductory Biochemistry           Therapeutics Engineerin</td><td>4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3</td></t<>	NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng. & Mg El Finl Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 306: Biofibrication Lab           BIOE 416: Biosensors           BIOE 424: Modeling for Angiogenesis           BIOE 430: Endocritical Biology           BIOE 440: Endocritical Biology           BIOE 451: Special Topics (Finite Element Methods in Biomedicine)           CHBE 471: Biokernical Engineering           BIOE 483: Special Topics (Finite Element Methods in Biomedicine)           CHBE 471: Enchennical Engineering           BIOE 473: Bioentapics in Biomolecular Eng           CHBE 472: Techniques in Biomolecular Eng           CHBE 472: Techniques in Biomolecular Eng           MSE 494: Laboratory Studies in Materials Science and Engineering           MSE 494: Laboratory Studies in Materials Science and Engineering           MSE 474: Biomaterials and Nanomedicine           MSE 474: Biomaterials and Nanomedicine           MSE 474: Biomaterials and Nanomedicine           MCB 450: Introductory Biochemistry           Therapeutics Engineerin	4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAKT 446: Tech, Ing. & Mg Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 306: Biodhrication Lab           BIOE 416: Bionemosen           BIOE 424: Modeling for Angiogenesis           BIOE 430: Intro Synthetic Biology           BIOE 430: Collard Biomechanics           BIOE 430: Intro Synthetic Biology           BIOE 430: Intro Synthetic Biology           BIOE 440: Collard Biomechanics           BIOE 430: Intro Synthetic Biology           BIOE 440: Thore Synthetic Biology           BIOE 440: Tobrics (Trainte Element Methods in Biomedicine)           CHBE 471: Techniques in Biomolecular Ing           BIOE 400: Elemential Mathy Control           MSE 474: Biodecinal Manomedicine           ME 445: Biological Na	4       3       3       3       4       2       3 <t< td=""><td>NPRE 498: Special Topics (Advanced Realization           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAC 46: Toch, Eng. &amp; Mg Hind Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics &amp; Design           Cell and Tissue Engineering Track           BIOE 300: Sindbrication Lab           BIOE 416: Biosensors           BIOE 424: Modeling for Angiogenesis           BIOE 430: Intro Synthetic Biology           BIOE 430: Introductory Studies in Materials Science and Engineering           CHB 471: Biochemical Engineering           CHB 472: Biomaterials and 1M anomedicine           ME 474: Biological Nanoenghenering           MSE 474: Biological Na</td><td>4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3</td></t<>	NPRE 498: Special Topics (Advanced Realization           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAC 46: Toch, Eng. & Mg Hind Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 300: Sindbrication Lab           BIOE 416: Biosensors           BIOE 424: Modeling for Angiogenesis           BIOE 430: Intro Synthetic Biology           BIOE 430: Introductory Studies in Materials Science and Engineering           CHB 471: Biochemical Engineering           CHB 472: Biomaterials and 1M anomedicine           ME 474: Biological Nanoenghenering           MSE 474: Biological Na	4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Reak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TAM 445: Continuum Mechanics         TAM 445: Continuum Mechanics         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOC 306: Biodafrication Lab         BIOC 416: Biosensors         BIOE 416: Biosensors         BIOE 430: Intro Synthetic Biology         BIOE 430: Laborenize Complexition	4       3       3       3       2       3 <t< td=""><td>NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. &amp; Mg El Finl Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics &amp; Design           Cell and Tissue Engineering Track           BIOE 306: Biofabrication Lab           BIOE 406: Biofabrication Lab           BIOE 416: Biosensors           BIOE 400: Gene Editing Lab           BIOE 400: Gene Editing Lab           BIOE 401: Endownechanics           BIOE 402: Special Topics (Finite Element Methods in Biomedicine)           CHBE 471: Biodemized Engineering           BIOE 482: Special Topics (Finite Element Methods in Biomedicine)           CHBE 472: Techniques in Biomolecular Eng           IE 472: Techniques in Biomolecular Eng           IE 472: Techniques in Biomolecular Eng           MSE 494: Laboratry Studies in Materials Science and Engineering           MSE 494: Laboratry Studies in Materials Science and Engineering           MSE 494: Laboratry Studies in Materials Science and Engineering           MSE 494: Laboratry Studies in Materials Science and Engineering           MSE 494: Laboratry Studies in Materials Science and Engineering           MSE 494: Laboratry Studies in Materials Science and</td><td>4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3</td></t<>	NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. & Mg El Finl Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 306: Biofabrication Lab           BIOE 406: Biofabrication Lab           BIOE 416: Biosensors           BIOE 400: Gene Editing Lab           BIOE 400: Gene Editing Lab           BIOE 401: Endownechanics           BIOE 402: Special Topics (Finite Element Methods in Biomedicine)           CHBE 471: Biodemized Engineering           BIOE 482: Special Topics (Finite Element Methods in Biomedicine)           CHBE 472: Techniques in Biomolecular Eng           IE 472: Techniques in Biomolecular Eng           IE 472: Techniques in Biomolecular Eng           MSE 494: Laboratry Studies in Materials Science and Engineering           MSE 494: Laboratry Studies in Materials Science and Engineering           MSE 494: Laboratry Studies in Materials Science and Engineering           MSE 494: Laboratry Studies in Materials Science and Engineering           MSE 494: Laboratry Studies in Materials Science and Engineering           MSE 494: Laboratry Studies in Materials Science and	4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Realization         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TAM 445: Continuum Mechanics         TAM 445: Continuum Mechanics         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 306: Biodafrication Lab         BIOE 416: Biosensors         BIOE 416: Collar King Lab         BIOE 424: Modeling for Angiogenesis         BIOE 430: Collar Synthetic Biology         BIOE 430: Collar Singering Track         BIOE 430: Special Topics (Finite Element Methods in Biomedicine)         CHBE 471: Bookennical Engineering         BIOE 430: Special Topics (Finite Element Methods in Biomedicine)         CHBE 472: Techniques in Biomolecular Ing         E 330: Industrial Quality Control         MSE 494: Laboratory Studies in Materials Science and Engineering         MSE 492: Laboratory Studies in Materials Science and Engineering         MSE 493: Laboratory Studies in Materials Science and Engineering         MSE 494: Laboratory Studies in Materials Science and Engineering         MSE 494: Laboratory Studies in Materials Science and Engineering         MSE 495: Introductory Biochemistry         Therapeutics Engineering Tr	4       3       3       3       4       2       3 <t< td=""><td>NPRE 498: Special Topics (Advanced Realization           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAK 746: Tech. Eng. &amp; Mg H Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics &amp; Design           Cell and Tissue Engineering Track           BIOR 306: Biofhrication Lab           BIOE 416: Bionensors           BIOE 424: Modeling for Angiogenesis           BIOE 430: Into Synthetic Biology           BIOE 430: Into Synthetic Biology           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 471: Bocherinkel Engineering           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 471: Bocherinkel Engineering           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 472: Techniques in Biomolecular Eng           E 1300: Industrial Quality Control           MSE 474: Biobardory Studies in Materials Science and Engineering           MSE 470: Design and Use of Biomaterials           MSE 474: Biomaterials and Nanomedicine           ME 433: Mechanobiology           Therapeutics Engineering Track           Recommended Free Elective:           MC</td><td>4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3</td></t<>	NPRE 498: Special Topics (Advanced Realization           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAK 746: Tech. Eng. & Mg H Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOR 306: Biofhrication Lab           BIOE 416: Bionensors           BIOE 424: Modeling for Angiogenesis           BIOE 430: Into Synthetic Biology           BIOE 430: Into Synthetic Biology           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 471: Bocherinkel Engineering           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 471: Bocherinkel Engineering           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 472: Techniques in Biomolecular Eng           E 1300: Industrial Quality Control           MSE 474: Biobardory Studies in Materials Science and Engineering           MSE 470: Design and Use of Biomaterials           MSE 474: Biomaterials and Nanomedicine           ME 433: Mechanobiology           Therapeutics Engineering Track           Recommended Free Elective:           MC	4 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Reak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Mechatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech. Eng. & Mg Final Project         Pre-Approved Biomechanics Track recommended free elective:         SE 101: Engineering Graphice & Design         Cell and Tissue Engineering Track         BIOE 161: Biodarication Lab         BIOE 416: Biosensors         BIOE 407: Gene Editing Lab         BIOE 408: Special Topics (Finite Element Methods in Biomedicine)         BIOE 409: Special Topics (Finite Element Methods in Biomedicine)         CHBE 472: Techniques in Biomolecular Eng         EI 330: Industrial Quality Centrel         MSE 404: Loboratory Studies in Materials Science and Engineering         MSE 470: Design and Use of Biomaterials         MSE 474: Biomaterials and Nanomedicine         MCB 435: Introductory Biochemistry         Therapeutics Engineering Track         ABE 446: Biological Nanoengineering         BIOE 347: Introductory Biochemistry         Therapeutics Engineering Track         ABE 446: Biological Nanoengineering	4         3         3         3         2         3         2         3 <td< td=""><td>NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. &amp; Mg El Finl Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics &amp; Design           Cell and Tissue Engineering Track           BIOE 306: Biofibrication Lab           BIOE 416: Biosensors           BIOE 416: Biosensors           BIOE 424: Modeling for Angiogenesis           BIOE 416: Elsensors           BIOE 425: Sene Cell Bionegineering           BIOE 430: Sene Cell Bionegineering           BIOE 440: Sene file Bioengineering           BIOE 437: Sene Cell Bionegineering           CHBE 471: Biochemical Engineering           CHBE 472: Techniques in Biomolecular Eng           IE 330: Industrial Quality Control           MSE 4404: Laboratry Studies in Materials Science and Engineering           MSE 4474: Biomaterials and Nanomedicine           ME 443: Mechanobiology           TIMCT 461: Tech. Eng, &amp;</td><td>4 3 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3</td></td<>	NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Eng. & Mg El Finl Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 306: Biofibrication Lab           BIOE 416: Biosensors           BIOE 416: Biosensors           BIOE 424: Modeling for Angiogenesis           BIOE 416: Elsensors           BIOE 425: Sene Cell Bionegineering           BIOE 430: Sene Cell Bionegineering           BIOE 440: Sene file Bioengineering           BIOE 437: Sene Cell Bionegineering           CHBE 471: Biochemical Engineering           CHBE 472: Techniques in Biomolecular Eng           IE 330: Industrial Quality Control           MSE 4404: Laboratry Studies in Materials Science and Engineering           MSE 4474: Biomaterials and Nanomedicine           ME 443: Mechanobiology           TIMCT 461: Tech. Eng, &	4 3 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Reak Analysis)           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech. Ing., & Mg Hinal Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOE 30: Enforthreation Lab           BIOE 416: Biosensors           BIOE 416: Collar Engineering for Angiogenesis           BIOE 424: Modeling for Angiogenesis           BIOE 436: Collar Biomechanics           BIOE 436: Collar Engineering           BIOE 447: Modeling for Angiogenesis           BIOE 447: Modeling Indo           BIOE 447: Modeling information           BIOE 448: Special Topics (Finite Element Methods in Biomedicine)           CHB 471: Esofermical Engineering           BIOE 448: Laboratory Studies in Materials Science and Engineering           MES 447: Esofermical Engineering           MES 447: Esofermical Engineering           MES 447: Loboratory Studies in Materials Science and Engineering           MES 447: Esofermical Engineering           MES 447: Biomatrial and Manomedicine           ME 447: Biomaterial and Manomedicine           ME 448: Mechanobiology           Thort 461: Tech, Eng, & Mgt Final	4         3         3         3         2         3         2         3 <td>NPRE 498: Special Topics (Advanced Realization           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAK 746: Tech. Eng. &amp; Mg H Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics &amp; Design           Cell and Tissue Engineering Track           BIOR 306: Biofhrication Lab           BIOE 416: Bionensors           BIOE 424: Modeling for Angiogenesis           BIOE 430: Into Synthetic Biology           BIOE 430: Into Synthetic Biology           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 471: Bocherinkel Engineering           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 471: Bocherinkel Engineering           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 472: Techniques in Biomolecular Eng           E 1300: Industrial Quality Control           MSE 474: Biobardory Studies in Materials Science and Engineering           MSE 470: Design and Use of Biomaterials           MSE 474: Biomaterials and Nanomedicine           ME 433: Mechanobiology           Therapeutics Engineering Track           Recommended Free Elective:           MC</td> <td>4 3 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3</td>	NPRE 498: Special Topics (Advanced Realization           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TAM 445: Continuum Mechanics           TAK 746: Tech. Eng. & Mg H Final Project           Pre-Approved Biomechanics Track recommended free elective:           SE 101: Engineering Graphics & Design           Cell and Tissue Engineering Track           BIOR 306: Biofhrication Lab           BIOE 416: Bionensors           BIOE 424: Modeling for Angiogenesis           BIOE 430: Into Synthetic Biology           BIOE 430: Into Synthetic Biology           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 471: Bocherinkel Engineering           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 471: Bocherinkel Engineering           BIOE 430: Special Topics (Finite Element Methods in Biomedicine)           CHE 472: Techniques in Biomolecular Eng           E 1300: Industrial Quality Control           MSE 474: Biobardory Studies in Materials Science and Engineering           MSE 470: Design and Use of Biomaterials           MSE 474: Biomaterials and Nanomedicine           ME 433: Mechanobiology           Therapeutics Engineering Track           Recommended Free Elective:           MC	4 3 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
NPRE 498: Special Topics (Advanced Rak Analysis)         SE 402: Comp-Aided Product Realization         SE 423: Machatronics         TAM 445: Continuum Mechanics         TMGT 461: Tech. Eng. & Mgt Final Project         Pre-Approved Bionechanics Track recommended free elective:         SE 101: Engineering Graphics & Design         Cell and Tissue Engineering Track         BIOE 306: Biofabrication Lab         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 416: Biosensors         BIOE 416: Discussions         BIOE 416: Storesmore         BIOE 416: Cellular Biomechanics         BIOE 407: Cellular Biomechanics         BIOE 408: Special Topics (Finite Eleneut Methods in Biomedicine)         CHBE 477: Biochemical Engineering         CHBE 477: Echniques in Biomolecular Eng         E 330: Industrial Quality Control         MSE 494: Loboratory Studies in Materials Science and Engineering         MSE 474: Biomaterials and Nanomedicine         MSE 474: Biomaterials and Nanomedicine         MCB 450: Introductory Biochemistry         Therapeutics Engineering Track         ABE 446: Biological Nancengineering         BIOE 450: Introductory Biochemistry         Therapeutics Engineering Track         ABE 474: Biomaterials and Nanomedicine	4         3         3         3         3         4         2         3 <td< td=""><td>NPRE 498: Special Topics (Advanced Realization           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng. &amp; Mg Final Project           <b>Pre-Approved Biomechanics Track recommended free elective:</b>           SE 101: Engineering Graphics &amp; Design           <b>Cell and Tissue Engineering Track</b>           BIOE 306: Sindbrication Lab           BIOE 416: Biosenzors           BIOE 424: Modeling for Angiogenesis           BIOE 420: Collabar Biomechanics           BIOE 430: Collabar Biomechanics           BIOE 430: Collabar Biomechanics           BIOE 430: Electropics (Finite Element Methods in Biomedicine)           CHB 471: Bioherinatic Engineering           BIOE 430: Electropics (Finite Element Methods in Biomedicine)           CHB 471: Bioherinatic Engineering           BIOE 430: Electropics (Finite Element Methods in Biomedicine)           CHB 471: Bioherinatic Engineering           BIOE 430: Electropics (Finite Element Methods in Biomedicine)           CHB 471: Bioherinatic Engineering           BIOE 430: Electropics (Finite Element Methods in Biomedicine)           CHB 471: Bioherinatic Tangle Control           MSE 478: Biomaterinal and Nanonedicine           MSE 478: Biomaterinal and Nanonedicine           MSE 470: Design and Use of Biomate</td><td>4 3 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3</td></td<>	NPRE 498: Special Topics (Advanced Realization           SE 402: Comp-Aided Product Realization           SE 423: Mechatronics           TAM 445: Continuum Mechanics           TMGT 461: Tech, Eng. & Mg Final Project <b>Pre-Approved Biomechanics Track recommended free elective:</b> SE 101: Engineering Graphics & Design <b>Cell and Tissue Engineering Track</b> BIOE 306: Sindbrication Lab           BIOE 416: Biosenzors           BIOE 424: Modeling for Angiogenesis           BIOE 420: Collabar Biomechanics           BIOE 430: Collabar Biomechanics           BIOE 430: Collabar Biomechanics           BIOE 430: Electropics (Finite Element Methods in Biomedicine)           CHB 471: Bioherinatic Engineering           BIOE 430: Electropics (Finite Element Methods in Biomedicine)           CHB 471: Bioherinatic Engineering           BIOE 430: Electropics (Finite Element Methods in Biomedicine)           CHB 471: Bioherinatic Engineering           BIOE 430: Electropics (Finite Element Methods in Biomedicine)           CHB 471: Bioherinatic Engineering           BIOE 430: Electropics (Finite Element Methods in Biomedicine)           CHB 471: Bioherinatic Tangle Control           MSE 478: Biomaterinal and Nanonedicine           MSE 478: Biomaterinal and Nanonedicine           MSE 470: Design and Use of Biomate	4 3 3 3 3 3 4 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3

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CS 101: Intro Computing: Engrg & Sci (CS 125 may be taken instead of CS 101. Student must complete curriculum modification	3	CS 101: Intro Computing: Engrg & Sci (CS 125 may be taken instead of CS 101. Student must complete	3
ABE 440: Applied Statistical Methods I	4	ABE 440: Applied Statistical Methods I	4
BIOE 424: Modeling for Angiogenesis	3	BIOE 424: Modeling for Angiogenesis	3
BIOE 430: Intro Synthetic Biology	3	BIOE 430: Intro Synthetic Biology	3
BIOE 498: Special Topics (Finite Element Methods in Biomedicine)	3	BIOE 498: Special Topics (Finite Element Methods in Biomedicine)	3
CS 225: Data Structures	4	CS 225: Data Structures	4
CS 398: Special Topics (Deep Learning)	3	CS 398: Special Topics (Deep Learning)	3
CS 411: Database Systems	3	CS 411: Database Systems	3
CS 412: Introduction to Data Mining	3	CS 412: Introduction to Data Mining	3
CS 440: Artificial Intelligence	3	CS 440: Artificial Intelligence	3
CS 465: User Interface Design	3	CS 465: User Interface Design	3
CS 466: Introduction to Bioinformatics	3	CS 466: Introduction to Bioinformatics	3
ECE 490: Introduction to Optimization	3	ECE 490: Introduction to Optimization	3
IE 310: Deterministic Models in Optimization	3	IE 310: Deterministic Models in Optimization	3
IE 370: Stochastic Processes and Applications	3	IE 370: Stochastic Processes and Applications	3
NPRE 498: Special Topics (Advanced Risk Analysis)	3	NPRE 498: Special Topics (Advanced Risk Analysis)	3
SE 423: Mechatronics	3	SE 423: Mechatronics	3
TMGT 461: Tech, Eng, & Mgt Final Project	2	TMGT 461: Tech, Eng, & Mgt Final Project	2
Imaging and Sensing:		Imaging and Sensing:	
ECE 210: Analog Signal Processing ECE 329: Fields and Waves I	*	ECE 210: Analog Signal Processing ECE 329: Fields and Waves I	*
	2		2
and select remaining hours from: BIOE 477: Imaging and Therapeutic Probes	3	and select remaining hours from: BIOE 477: Imaging and Therapeutic Probes	2
BIOE 4//: Imaging and Therapeutic Probes BIOE 498: Special Topics (Surgical Techniques)	3	BIOE 4//: Imaging and Therapeutic Probes BIOE 498: Special Topics (Surgical Techniques)	2
BIOE 496: Special Topics (Surgical Techniques) BIOE 498: Special Topics (Preclinical Molecular Imaging)	2	BIOE 498: Special Topics (Surgical Techniques) BIOE 498: Special Topics (Preclinical Molecular Imaging)	3
ECE 310: Digital Signal Processing	3	ECE 310: Digital Signal Processing	3
ECE 310: Digital Signal Processing ECE 311: Digital Signal Processing Lab	- 1	ECE 310: Digital Signal Processing ECE 311: Digital Signal Processing Lab	1
ECE 380: Biomedical Imaging	3	ECE 30: Biomedical Imaging	3
ECE 416: Biosensors	3	ECE 500: Bionedical Imaging ECE 416: Biosensors	3
ECE 460: Optical Imaging	4	ECE 460: Optical Imaging	4
ECE 467: Biophotonics	3	ECE 467: Biophotonics	3
ECE 473: Fund of Engrg Acoustics	3	ECE 473: Fund of Engrg Acoustics	3
ECE 480: Magnetic Resonance Imaging	3	ECE 480: Magnetic Resonance Imaging	3
ME 487: MEMS-NEMS Theory & Fabrication	4	ME 487: MEMS-NEMS Theory & Fabrication	4
NPRE 498: Special Topics (Advanced Risk Analysis)	3	NPRE 498: Special Topics (Advanced Risk Analysis)	3
SE 423: Mechatronics	3	SE 423: Mechatronics	3
TMGT 461: Tech, Eng, & Mgt Final Project	2	TMGT 461: Tech, Eng, & Mgt Final Project	2
Recommended Free Elective:		Recommended Free Elective:	
CHEM 442: Physical Chemistry I	4	CHEM 442: Physical Chemistry I	4
General Education Requirements		General Education Requirements	
A minimum of six courses is required, as follows:	18	A minimum of six courses is required, as follows:	18
Social and Behavioral Sciences	6	Social and Behavioral Sciences	6
Humanities & the Arts	6	Humanities & the Arts	6
The Grainger College of Engineering Liberal Education course list, or from the campus General Education lists for Social and Behavioral	6	The Grainger College of Engineering Liberal Education course list, or from the campus General Education lists for	6
Sciences or Humanities and the Arts		Social and Behavioral Sciences or Humanities and the Arts Cultural Studies: Non-Western Cultures (1 course)	
Cultural Studies: Non-Western Cultures (1 course)			
Cultural Studies: U.S. Minorities Cultures (1 course)		Cultural Studies: U.S. Minorities Cultures (1 course)	
Cultural Studies: Western/Comparative Cultures (1 course)		Cultural Studies: Western/Comparative Cultures (1 course)	
Non Primary Language Dequirement	0-9	Non Primary Language Dequirement	0-9
Non-Primary Language Requirement Complation of the third semacter or acuivalant of a non-primary language is required. Complation of three years of a single language in	0-7	Non-Primary Language Requirement Completion of the third compactor or equivalent of a non-primary language is required. Completion of three years of a	0-7
Completion of the third semester or equivalent of a non-primary language is required. Completion of three years of a single language in high school satisfies this requirement.		Completion of the third semester or equivalent of a non-primary language is required. Completion of three years of a single language in high school satisfies this requirement.	
University Composition	4-6	University Composition	4-6
RHET 105: Writing and Research	4	RHET 105: Writing and Research	4
CMN 111: Oral & Written Comm I	4		
CMN 111. Oral & whitel Collin 1	3	CMN 111: Oral & Written Comm I	3
& CMN 112: and Oral & Written Comm II	3	& CMN 112: and Oral & Written Comm II	3 3
	3 3 3		3 3 3
& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I & ESL 112: and Intro to Academic Writing II	3 3 3 3 3	& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I & FSL 112: and Intro to Academic Writing II	3 3 3
& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I & ESL 112: and Intro to Academic Writing II ESL 115: Principles of Academic Writing	3 3 3 3 3 4	& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I & ESL 112: and Intro to Academic Writing II ESL 115: Principles of Academic Writing	3 3 3 3 4
& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I & ESL 112: and Intro to Academic Writing II ESL 115: Principles of Academic Writing Advanced Composition May be satisfied by completing a course in either the liberal education or free elective categories which has the	3 3 3 3 3 4	& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I & ESL 112: and Intro to Academic Writing II ESL 115: Principles of Academic Writing Advanced Composition May be satisfied by completing a course in either the liberal education or free elective	3 3 3 4
& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I & ESL 112: and Intro to Academic Writing II ESL 115: Principles of Academic Writing	3 3 3 3 4	& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I & ESL 112: and Intro to Academic Writing II ESL 115: Principles of Academic Writing	3 3 3 4
& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I & ESL 112: and Intro to Academic Writing II ESL 115: Principles of Academic Writing Advanced Composition May be satisfied by completing a course in either the liberal education or free elective categories which has the Advanced Composition designation.	3 3 3 3 4 4	& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I & ESL 112: and Intro to Academic Writing II ESL 115: Principles of Academic Writing Advanced Composition May be satisfied by completing a course in either the liberal education or free elective categories which has the Advanced Composition designation.	3 3 3 4
& CMN 112: and Oral & Written Comm II      ESL 111: Intro to Academic Writing I      & ESL 112: and Intro to Academic Writing II      ESL 115: Principles of Academic Writing II      ESL 115: Principles of Academic Writing I      Advanced Composition daviser a statistical by completing a course in either the liberal education or free elective categories which has the     Advanced Composition daviseration.      Free Electives	3 3 3 3 4 6 6	& CMN 112: and Oral & Written Comm II      ESL 111: Intro to Academic Writing I      & ESL 112: and Intro to Academic Writing II      ESL 113: Principles of Academic Writing      Advanced Composition day be satisfied by completing a course in either the liberal education or free elective     categories which has the Advanced Composition designation.      Free Electives	3 3 3 3 4 8
& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I ESL 111: Intro to Academic Writing I ESL 112: And Intro to Academic Writing II ESL 115: Principles of Academic Writing Advanced Composition May be satisfied by completing a course in either the liberal education or free elective categories which has the Advanced Composition designation. Free Electives Free electives Free electives Additional unrestricted course work, subject to certain exceptions as noted by the College, so that there are at least 128	3 3 3 3 4 6 6	& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I & ESL 112: Intro to Academic Writing I ESL 115: Principles of Academic Writing Advanced Composition May be satisfied by completing a course in either the liberal education or free elective categories which has the Advanced Composition designation. Free Electives Free Electives	3 3 3 4 8
& CMN 112: and Oral & Written Comm I1 ESL 111: Intro to Academic Writing I     & ESL 112: and Intro to Academic Writing II     ESL 115: Principles of Academic Writing     ESL 115: Principles of Academic Writing     Advanced Composition May be satisfied by completing a course in either the liberal education or free elective categories which has the     Advanced Composition designation.     Free Electives	3 3 3 3 4 6 128	& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I     & ESL 112: and Intro to Academic Writing II     ESL 113: Principles of Academic Writing     Advanced Composition day be satisfied by completing a course in either the liberal education or free elective     categories which has the Advanced Composition designation.     Free Electives	3 3 3 4 4 8 8 128
& CMN 112: and Orn4 & Written Comm II      ESL 111: Intro to Academic Writing I      ESL 112: and Intro to Academic Writing II      ESL 115: Principles of Academic Writing      ESL 115: Principles of Academic Writing      Advanced Composition May be satisfied by completing a course in either the liberal education or free elective categories which has the     Advanced Composition days be satisfied by completing a course in either the liberal education or free elective categories which has the     Advanced Composition days as a statisfied by completing a course in either the liberal education or free elective categories which has the     Advanced Composition designation.      Free Electives     Free Electives     Additional unrestricted course work, subject to certain exceptions as noted by the College, so that there are at least 128     credit hours carried toward the degree.	3 3 3 3 4 6 128	& CMN 112: and Oral & Written Comm II  ESL 111: Intro to Academic Writing I  ESL 112: and Intro to Academic Writing II  ESL 115: Principles of Academic Writing  HESL 115: Principles of Academic Writing  Advanced Composition day be satisfied by completing a course in either the liberal education or free elective categories which has the Advanced Composition designation.  Free Electives Free electives.  Additional unrestricted course work, subject to certain exceptions as noted by the College, so that there are at least 128 cerd hours came to tward the degree.	3 3 3 4 8 8 128
& CMN 112: and Oral & Written Comm II      ESL 111: Intro to Academic Writing I      ESL 112: and Intro to Academic Writing II      ESL 115: Principles of Academic Writing      ESL 115: Principles of Academic Writing      Advanced Composition May be satisfied by completing a course in either the liberal education or free elective categories which has the     Advanced Composition days be satisfied by completing a course in either the liberal education or free elective categories which has the     Advanced Composition days be satisfied by completing a course in either the liberal education or free elective categories which has the     Advanced Composition designation.      Free Electives     Free electives     Additional unrestricted course work, subject to certain exceptions as noted by the College, so that there are at least 128     credit hours carried toward the degree.	3 3 3 3 4 6 128	& CMN 112: and Oral & Written Comm II  ESL 111: Intro to Academic Writing I  ESL 112: and Intro to Academic Writing II  ESL 115: Principles of Academic Writing  HESL 115: Principles of Academic Writing  Advanced Composition day be satisfied by completing a course in either the liberal education or free elective categories which has the Advanced Composition designation.  Free Electives Free electives.  Additional unrestricted course work, subject to certain exceptions as noted by the College, so that there are at least 128 cerd hours came to tward the degree.	3 3 3 4 8 128
& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I ESL 111: Intro to Academic Writing I ESL 115: Principles of Academic Writing II	3 3 3 4 6 128	& CMN 112: and Oral & Written Comm II ESL 111: Intro to Academic Writing I	3 3 3 4 8 8 128
& CMN 112: and Oral & Written Comm II  ESL 111: Intro to Academic Writing I  ESL 113: Intro to Academic Writing II  ESL 113: Principles of Academic Writing II  ESL 113: Principles of Academic Writing II  ESL 113: Principles of Academic Writing II  ESL 115: Principles  ESL 115: Principles Of Academic Writing II  ESL 115: Pri	3 3 3 3 4 6 128	& CMN 112: and Oral & Written Comm II      ESL 111: Intro to Academic Writing I          ESL 112: and hort to Academic Writing II          ESL 113: Principles of Academic Writing          ESL 113: Principles of Academic Writing          Advanced Composition May be satisfied by completing a course in either the liberal education or free elective         categories which has the Advanced Composition designation.          Free Electives          Free electives.         Additional unrestricted course work, subject to certain exceptions as noted by the College, so that there         are at least 128 ered liberary acmed toward the degree.         Total Hours of Curriculum to Graduate          Foreolective	3 3 3 4 4 8 8 128 1

Date Submitted: 09/04/19 3:45 pm

# Viewing: 10KP4048BS : Aerospace

# **Engineering, BS**

Last approved: 08/12/19 8:35 am

Last edit: 11/15/19 11:14 am

Changes proposed by: Tim Bretl

Catalog Pages Using this Program Aerospace Engineering, BS

## In Workflow

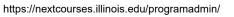
- 1. U Program Review
- 2. 1615 Head
- 3. KP Committee Chair
- 4. KP Dean
- 5. University Librarian
- 6. Provost
- 7. Senate EPC
- 8. Senate
- 9. U Senate Conf
- 10. Board of Trustees
- 11. IBHE
- 12. DMI

# Approval Path

- 09/04/19 4:33 pm Deb Forgacs (dforgacs): Approved for U Program Review
- 2. 09/04/19 4:54 pm Tim Bretl (tbretl): Approved for 1615 Head
- 3. 11/13/19 7:54 am Brooke Newell (bsnewell): Approved for KP Committee Chair
- 4. 11/13/19 10:35 am Candy Deaville (candyd): Approved for KP Dean
- 5. 11/13/19 11:59 am John Wilkin

(jpwilkin):

**35** 1/16



- Approved for University Librarian
- 6. 11/14/19 8:57 am Kathy Martensen (kmartens): Approved for Provost

# History

- 1. Jul 5, 2019 by Deb Forgacs (dforgacs)
- 2. Aug 9, 2019 by Deb Forgacs (dforgacs)
- 3. Aug 12, 2019 by Deb Forgacs (dforgacs)

# Proposal Type

Proposal Type: Major (ex. Special Education)

This proposal is for a: Revision

Proposal Title:

if this proposal is one piece of a multi-element change please include the other impacted programs here. *example: A BS revision with multiple concentration revisions* 

# Administrative approval: Require aerospace computer-aided design in the AE curriculum UG course lists approval.

Is this program **No** available on campus and online? Official Program Aerospace Engineering, BS Name Banner/Codebook Name BS: Aerospace Engr -- UIUC



11/15/2019	Program Management		
Corresponding Degree			
Program Code:	10KP4048BS		
Major 4048 Code	Minor Code	Conc Code	Degree Code
BS			
EP Control Number	EP.20.42		
Senate Approval Date			
Senate Conference Approval Date			
BOT Approval Date			
IBHE Approval Date			
Effective Date:			
Effective Catalog Term	Spring 2020		
Sponsor College	Grainger College of Engineering		
Sponsor Department	Aerospace Engineering		
Sponsor Name tbretl@illinois.ed	Timothy Bretl lu	Sponsor E	Email
College Contact	Brooke Newell	College Co Email	ontact
bsnewell@illinois			
Is this program inte	rdisciplinary?		
Νο			
Academic Level	Undergraduate		
Will you admit to the concentration directly?			
Is a concentration required for			

graduation?

CIP Code 140201 - Aerospace, Aeronautical and Astronautical/Space Engineering.

### Program Description and Justification

Justification for proposal change:

The proposed curriculum change does two things:

It removes PHYS 213 (Thermal Physics) as a required course.
 It adds AE 140 (Aerospace Computer-Aided Design) as a required course.

The faculty of Aerospace Engineering voted to adopt this change in May, 2014. The vote was recorded in the meeting minutes.

There will be a net zero change in the total number of required hours (both are 2 credit hours).

The total number of basic math and science hours will decrease from 36 hours to 34 hours, which remains above the minimum of 32 hours that are required for ABET accreditation.

A course proposal for AE 140 is currently under review. It has been taught as AE 199 every fall and spring semester since Fall 2013 - a total of 13 offerings - with an average enrollment of 70 students.

Curriculum modification approvals have been provided by COE since 2016 for AE students who have taken AE 140 (as AE 199) and who have not taken PHYS 213 - nearly all students have done so.

#### THE REASONS FOR REMOVING PHYS 213

The key reason for removing PHYS 213 as a required course is the significant overlap between this course and ME 200 (Thermodynamics), which is also required for AE students. The AE Undergraduate Curriculum Committee determined that AE students benefitted most from ME 200, and that juniorand senior-level AE courses depended on the background provided in ME 200 but not on the background provided in PHYS 213.

Here is the course description for PHYS 213:

"First and second laws of thermodynamics including kinetic theory of gases, heat capacity, heat engines, introduction to entropy and statistical mechanics, and introduction to application of free energy and Boltzmann factor. A



calculus-based approach for majors in engineering, mathematics, physics and chemistry."

Here is the course description for ME 200:

"Classical thermodynamics through the second law; system and controlvolume analyses of thermodynamic processes; irreversibility and availability; relations for ideal gas mixtures."

**THE REASONS FOR ADDING AE 140** 

There are two key reasons for adding AE 140 as a required course.

First, it will support student success throughout the AE curriculum. Students in AE senior design (AE 442/443), in particular, are required to use CAD software to model engineering components as part of their design projects. Without a required CAD course, many AE students would be learning to use CAD software for the first time in senior design. This reduced the quality and scope of their work, limited their ability to express their ideas, and reduced the time they could spend on other aspects of their design project.

Second, it will improve job placement and better prepare AE students both for internship and co-op positions and for permanent positions within the aerospace industry. CAD software is widely used throughout this industry.

Here is the course description for AE 140:

"Computer-aided design (CAD) software modeling of engineered components. Sketching and three-dimensional solid modeling. Complex surface modeling. Production of assembly drawings and exploded views. Creation of dimensioned drawings using best practices for manufacturing. Sketching of parts in isometric views and multi-view drawings along with spatial visualization. Aerospace engineering-themed final project."

Please note that the existing BS/MS in Aerospace is unchanged as part of the proposed revision. Course Requirements

B.S. Component (121 hours)1

Same required courses as the traditional B.S. degree with minimum hours required reduced from 128 to 121. The reduction of 7 credit hours includes: 4 hours in Free Electives in both AE curricula 3 hours in other non-AE Technical Electives



component of the program.

Students can apply after they complete their junior-level courses, but before they start their senior year.

Illinois undergraduate student minimum residence requirement must be satisfied.

At the graduate level, requirements are identical for both the M.S. Non-Thesis Track (32 additional hours of coursework) and the M.S. Thesis Track (32 additional hours of coursework).

1 If the student withdraws from the MS component they must revert to the traditional BS degree program and satisfy all degree requirements of the BS curriculum.

Is This a Teacher Certification Program? No

Will specialized accreditation be sought for this program?

No

# Admission Requirements

Desired

Fall 2020

Admissions Term

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

#### Unchanged.

Describe how critical academic functions such as admissions and student advising are managed.

#### Unchanged.

## Enrollment

Describe how this revision will impact enrollment and degrees awarded.

#### No impact.

Estimated Annual Number of Degrees Awarded

Year One Estimate

5th Year Estimate (or when fully implemented)

What is the matriculation

term for this program?

#### Fall

Delivery Method

This program is available: Face-to-Face

# Budget

Are there budgetary implications for this revision?

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

No

No

Additional Budget Information

Attach File(s)

# **Resource Implications**

Facilities

Will the program require new or additional facilities or significant improvements to already existing facilities?

No

Technology

Will the program need additional technology beyond what is currently available for the unit?

No

#### Non-Technical Resources

Will the program require additional supplies, services or equipment (non-technical)?

No

Resources

Faculty Resources

#### Program Management

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc. Describe how the unit will support student advising, including job placement and/or admission to advanced studies.

#### A member of the AE faculty and instructional staff will have to teach one additional 2-hour course each semester (AE 140). This has been done every semester since Fall 2013, with no significant impact on faculty resources.

#### Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

#### None.

Instructional Resources

Will there be any reduction in other course offerings, programs or concentrations by your department as a result of this new program/proposed change?

No

Does this new program/proposed change result in the replacement of another program?

No

Does the program include other courses/subjects impacted by the creation/revision of this program?

No

#### **Financial Resources**

How does the unit intend to financially support this proposal?

#### None needed beyond what is normally available to support instructors, either through faculty teaching assignments or through hiring lecturers and other teaching specialists.

Will the unit need to seek campus or other external resources?

No

Attach letters of support

Will an existing tuition rate be used or continue to be used for this program?

Yes

# Program Regulation

Describe how the program is aligned with or meets licensure, certification, and/or entitlement requirements, if applicable.

Briefly describe the plan to assess and improve student learning, including the program's learning objectives; when, how, and where these learning objectives will be assessed; what metrics will be used to signify student's achievement of the stated learning objectives; and the process to ensure assessment results are used to improve student learning.

#### Unchanged.

# The total number of basic math and science hours will decrease from 36 hours to 34 hours, which remains above the minimum of 32 hours that are required for ABET accreditation.

Is the career/profession for graduates of this program regulated by the State of Illinois?

No

# Program of Study

"Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60 quarter credit hours) in upper division courses" (source:

*https://www.ibhe.org/assets/files/PrivateAdminRules2017.pdf).* For proposals for new bachelor's degrees, if this minimum is not explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.

All proposals must attach the new or revised version of the Academic Catalog program of study entry. Contact your college office if you have questions.

Revised programs **AE Program of Study Change.xlsx** 

Attach a side-by-side comparison with the existing program AND, if the revision references or adds "chose-from" lists of courses students can select from to fulfill requirements, a listing of these courses, including the course rubric, number, title, and number of credit hours.

Catalog Page Text

Catalog Page Text: Description of program for the catalog page. This is not official content, it is used to help build the catalog pages for the program. Can be edited in the catalog by the college or department.

Statement for Programs of Study Catalog

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as follows.

Orientation and Professional Development

#### Program Management

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Course List

Code	Title	Hours
<u>AE 100</u>	Intro to Aerospace Engineering 1	2
<u>ENG 100</u>	Engineering Orientation 2	0
Total Hours		2

# Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Course List

Code	Title	Hours
<u>CHEM 102</u>	General Chemistry I	3
<u>CHEM 103</u>	General Chemistry Lab I	1
<u>MATH 221</u>	Calculus I 3	4
<u>MATH 225</u>	Introductory Matrix Theory	2
<u>MATH 231</u>	Calculus II	3
<u>MATH 241</u>	Calculus III	4
<u>MATH 285</u>	Intro Differential Equations	3
<u>PHYS 211</u>	University Physics: Mechanics	4
<u>PHYS 212</u>	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	<del>2</del>
Total Hours		28

# Aerospace Engineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of aerospace engineering.

Course List

Code	Title	Hours
AE 140	Course AE 140 Not Found (Aerospace Computer-Aided Design)	2
<u>AE 202</u>	Aerospace Flight Mechanics	3
<u>AE 311</u>	Incompressible Flow	3
<u>AE 312</u>	Compressible Flow	3
<u>AE 321</u>	Mechs of Aerospace Structures	3
<u>AE 323</u>	Applied Aerospace Structures	3
<u>AE 352</u>	Aerospace Dynamical Systems	3
<u>AE 353</u>	Aerospace Control Systems	3
<u>AE 370</u>	Aerospace Numerical Methods	3
<u>AE 433</u>	Aerospace Propulsion	3
<u>AE 442</u>	Aerospace Systems Design I	3
<u>AE 443</u>	Aerospace Systems Design II	3
<u>AE 460</u>	Aerodynamics & Propulsion Lab	2
<u>AE 461</u>	Structures & Control Lab	2
<u>AE 483</u>	Unmanned Aerial Vehicle (UAV) Navigation and Control	3
<u>ECE 205</u>	Electrical and Electronic Circuits	3

Program Management

Code Titl	e	Hours
ECE 206 Ele	ctrical and Electronic Circuits Lab	1
IE 300 Ana	alysis of Data 4	3
	ermodynamics	3
	gineering Materials	3
-	roduction to Statics	2
		3
	roductory Dynamics	
Total Hours		60
Technical	Electives	
These courses	s stress the rigorous analysis and design principles practiced in the major subdis	sciplines
of aerospace	engineering.	
	Course List	
Code	Title	Hours
	the departmentally approved list of Technical Electives, satisfying these	
distribution re		
	AE Technical Electives listed below	6
		0 to 5
<u>AE 199</u>	Undergraduate Open Seminar Orbital Mechanics	
<u>AE 402</u>	Orbital Mechanics	3 or
45 400		4
<u>AE 403</u>	Spacecraft Attitude Control	3 or
		4
<u>AE 410</u>	Computational Aerodynamics	3 or
		4
<u>AE 412</u>	Viscous Flow & Heat Transfer	4
<u>AE 416</u>	Applied Aerodynamics	3 or
		4
<u>AE 419</u>	Aircraft Flight Mechanics	3 or
		4
<u>AE 420</u>	Finite Element Analysis	3 or
		4
<u>AE 427</u>	Mechanics of Polymers	3
<u>AE 428</u>	Mechanics of Composites	3
<u>AE 434</u>	Rocket Propulsion	3 or
		4
<u>AE 435</u>	Electric Propulsion	3 or
		4
<u>AE 451</u>	Aeroelasticity	3 or
		4
<u>AE 454</u>	Systems Dynamics & Control	3 or
		4
<u>AE 456</u>	Global Nav Satellite Systems	4
<u>AE 468</u>	Optical Remote Sensing	3
<u>AE 482</u>	Introduction to Robotics	4
<u>AE 497</u>	Independent Study	1 to 4
<u>AE 497</u> <u>AE 498</u>	Special Topics	1 to 4
	Interdisciplinary Design Proj (CU1 & CU2)	1 to 4 1 to 4
<u>ENG 491</u>		45
https://nextcourses.illing	pis.edu/programadmin/	11/16

11/10/2010			
Code	Title		Hours
Chosen from	AE Technical Electives or Non-AE Tec	hnical Electives	6
<u>ASTR 404</u>	Stellar Astrophysics		3
<u>ASTR 405</u>	Planetary Systems		3
ASTR 406	Galaxies and the Universe		3
ASTR 414	Astronomical Techniques		4
ATMS 301	Atmospheric Thermodynamics		3
ATMS 302	Atmospheric Dynamics I		3
ATMS 303	Synoptic-Dynamic Wea Analysis		4
ATMS 304	Radiative Transfer-Remote Sens		3
ATMS 305	Computing and Data Analysis		3
ATMS 306	Cloud Physics		3
ATMS 313	Synoptic Weather Forecasting		4
ATMS 406	Tropical Meteorology		4
ATMS 410	Radar Remote Sensing		4
<u>CEE 310</u>	Transportation Engineering		3
<u>CEE 330</u>	Environmental Engineering		3
<u>CEE 360</u>	Structural Engineering		3
<u>CEE 380</u>	Geotechnical Engineering		3
			3 or
<u>CEE 407</u>	Airport Design		4
CEE 412	High Crood Dail Engineering		
<u>CEE 412</u>	High-Speed Rail Engineering		3 or
	Further and a Flyid Machanica		4
<u>CEE 451</u>	Environmental Fluid Mechanics		3
<u>CEE 471</u>	Structural Mechanics		3 or
			4
<u>CHEM 232</u>	Elementary Organic Chemistry I		3 or
			4
CHEM 233	Elementary Organic Chem Lab I		2
<u>CHEM 236</u>	Fundamental Organic Chem I		4
<u>CS 101</u>	Intro Computing: Engrg & Sci		3
<u>CS 125</u>	Intro to Computer Science		4
<u>CS 225</u>	Data Structures		4
<u>CS 420</u>	Parallel Progrmg: Sci & Engrg		3 or
			4
<u>CS 461</u>	Computer Security I		4
<u>CS 465</u>	User Interface Design		3 or
			4
<u>CSE 412</u>	Numerical Thermo-Fluid Mechs		2 to 4
<u>ECE 210</u>	Analog Signal Processing		4
<u>ECE 220</u>	Computer Systems & Programming	]	4
ECE 310	Digital Signal Processing		3
ECE 311	Digital Signal Processing Lab		1
ECE 329	Fields and Waves I		3
ECE 330	Power Ckts & Electromechanics		3
ECE 342	Electronic Circuits		3
half the second se			46
nttps://nextcourses.illin	ois.edu/programadmin/		12/16

Code	Title	Hours
ECE 343	Electronic Circuits Laboratory	1
<u>ECE 385</u>	Digital Systems Laboratory	3
<u>ECE 473</u>	Fund of Engrg Acoustics	3 or
		4
<u>ECE 486</u>	Control Systems	4
<u>ENG 491</u>	Interdisciplinary Design Proj (SEctions SAE and HYP)	1 to 4
<u>MSE 401</u>	Thermodynamics of Materials	3
<u>MSE 440</u>	Mechanical Behavior of Metals	3
<u>MSE 443</u>	Design of Engineering Alloys	3
<u>MSE 498</u>	Special Topics (Section CM3)	1 to 4
<u>SE 310</u>	Design of Structures and Mechanisms	3
<u>SE 420</u>	Digital Control Systems	4
<u>SE 423</u>	Mechatronics	3
<u>IE 310</u>	Deterministic Models in Optimization	3
<u>MATH 347</u>	Fundamental Mathematics	3
<u>MATH 402</u>	Non Euclidean Geometry	3 or
		4
<u>MATH 413</u>	Intro to Combinatorics	3 or
		4
<u>MATH 416</u>	Abstract Linear Algebra	3 or
		4
<u>MATH 442</u>	Intro Partial Diff Equations	3 or
		4
<u>MATH 446</u>	Applied Complex Variables	3 or
		4
<u>MATH 461</u>	Probability Theory	3 or
MATH 400		4
<u>MATH 482</u>	Linear Programming	3 or
	Nonlinear Programming	4 3 or
<u>MATH 484</u>	Nonlinear Programming	3 Or 4
<u>MATH 489</u>	Dynamics & Differential Eqns	4 3 or
<u>MATT 409</u>		4
<u>ME 320</u>	Heat Transfer	4
<u>ME 360</u>	Signal Processing	3.5
<u>ME 370</u>	Mechanical Design I	3
<u>ME 400</u>	Energy Conversion Systems	3 or
<u>112 100</u>		4
<u>ME 401</u>	Refrigeration and Cryogenics	3 or
		4
<u>ME 498</u>	Special Topics	0 to 4
<u>MSE 450</u>	Polymer Science & Engineering	3 or
		4
<u>MSE 453</u>	Plastics Engineering	3

I	Code	Title	Hours	
	<u>MSE 457</u>	Polymer Chemistry	3 or	
			4	
	<u>NPRE 201</u>	Energy Systems	2 or	
			3	
	<u>NPRE 402</u>	Nuclear Power Engineering	3 or	
			4	
	<u>NPRE 470</u>	Fuel Cells & Hydrogen Sources	3	
	<u>NPRE 475</u>	Wind Power Systems	3 or	
			4	
	<u>NPRE 498</u>	Special Topics (Energy Storage and Conveyance)	1 to 4	
	<u>PHYS 325</u>	Classical Mechanics I	3	
	<u>PHYS 326</u>	Classical Mechanics II	3	
	<u>PHYS 435</u>	Electromagnetic Fields I	3	
	<u>PHYS 485</u>	Atomic Phys & Quantum Theory	3	
	<u>PHYS 486</u>	Quantum Physics I	4	
	<u>STAT 428</u>	Statistical Computing	3 or	
			4	
	<u>STAT 448</u>	Advanced Data Analysis	4	
	<u>TAM 324</u>	Behavior of Materials	4	
	<u>TAM 451</u>	Intermediate Solid Mechanics	4	
	<u>TAM 456</u>	Experimental Stress Analysis	3	
	<u>TAM 470</u>	Computational Mechanics	3 or	
			4	
	<u>TE 401</u>	Developing Breakthrough Projects	1 to 4	
	<u>TMGT 461</u>	Tech, Eng, & Mgt Final Project	2	
	General Ec	Jucation Requirements		
		Course List		
	Code	Title	Hours	
		six courses is required, as follows:	18	
		avioral Sciences	6	
	Humanities & t		6	
		College of Engineering Liberal Education course list, or from the campus General	6	
	-	for Social and Behavioral Sciences or Humanities and the Arts	0	
		s: Non-Western Cultures (1 course)		
		s: U.S. Minorities Cultures (1 course)		
		s: Western/Comparative Cultures (1 course)		
	Non-Prima	iry Language Requirement		
		Course List		
	Code	Title	Hours	
	•	the third semester or equivalent of a non-primary language is required. three years of a single language in high school satisfies this requirement.	0-9	
	-			
	University Composition			
	These courses teach fundamentals of expository writing.			
		Course List	10	
h	ttps://nextcourses.illinoi	s.edu/programadmin/	<b>+0</b> 14/16	;

1	1/15/2019	Program Management	
	Code	Title	Hours
	Choose one:		
	<u>RHET 105</u>	Writing and Research	
	<u>CMN 111</u>	Oral & Written Comm I	
	& <u>CMN 112</u>	and Oral & Written Comm II	
	<u>ESL 111</u>	Intro to Academic Writing I	
	& <u>ESL 112</u>	and Intro to Academic Writing II	
	<u>ESL 115</u>	Principles of Academic Writing	
	Advanced Composition (satisf	ied by completing the sequence <u>AE 442</u> + <u>AE 443</u> in the	
	Aerospace Engineering Techni	ical Core )	
	Free Electives		
		Course List	
	Code	Title	Hours
	Free Electives		
	Free electives. Additional unre	estricted course work, subject to certain exceptions as noted by	6
		at least 128 credit hours earned toward the degree.	
	Total Hours of Curriculum to C	Graduate	128
	1		
	2		
	3 <u>MATH 220</u> may be substitute	ed, with four of the five credit hours applying toward the degree.	
	MATH 220 is appropriate for	students with no background in calculus.	
	4 <u>STAT 400</u> may be substitute	d.	
	EP Documentation		
	Attach		
	Rollback/Approval		
	Notices		
	DMI Documentation		
1			
	Attach Final		
	Approval Notices		
	Attached		
	Document		
	Document		
	Justification for		
	this request		
	Program Reviewer		
	Comments		
		) (09/04/19 2:08 pm): Rollback: Side by side	
	-	new program of study needed for submission.	
		ens) (11/15/19 8:29 am): Admin approval: Does not	
		ram; does not restrict options for students.	
			10
h	tps://nextcourses.illinois.edu/programadmin/		<b>1</b> 5/16



Current Requirements	Current Hours	Revised Requirements	Revised Hours
Orientation and Professional Development AE 100 Introduction to Aerospace Engineering*	<b>0-2</b> 2	Orientation and Professional Development AE 100 Introduction to Aerospace Engineering*	<b>0-2</b> 2
ENG 100 Engineering Orientation	2	ENG 100 Engineering Orientation	2
Live 100 Engineering Orientation	0	Live 100 Engineering orientation	0
Foundational Mathematics and Science	35	Foundational Mathematics and Science	33
CHEM 102 General Chemistry 1	3	CHEM 102 General Chemistry 1	3
CHEM 103 General Chemistry Lab 1	1	CHEM 103 General Chemistry Lab 1	1
MATH 221 Calculus I	4	MATH 221 Calculus I	4
MATh 225 Introductory Matrix Theory	2	MATh 225 Introductory Matrix Theory	2
MATH 231 Calculus II	3	MATH 231 Calculus II	3
MATH 241 Calculus III	4	MATH 241 Calculus III	4
MATH 285 Intro Differential Equations	8	MATH 285 Intro Differential Equations	8
PHYS 211 University Physics: Mechanics	4	PHYS 211 University Physics: Mechanics	4
PHYS 212 University Physics: Elec & Mag	4	PHYS 212 University Physics: Elec & Mag	4
PHYS 213 University Physics: Thermal Physics	2		
Assesses Engineering Technical Core	57	Aerospace Engineering Technical Core	59
Aerospace Engineering Technical Core		AE 140 Aerospace Computer Aided Design**	2 3
AE 202 Aerospace Flight Mechanics	3	AE 202 Aerospace Flight Mechanics	3
AE 311 Incompressible Flow AE 312 Compressible Flow	3	AE 311 Incompressible Flow AE 312 Compressible Flow	3
AE 312 Compressible Flow AE 321 Mechs of Aerospace Structures	3	AE 312 Compressible riow AE 321 Mechs of Aerospace Structures	3
AE 323 Applied Aerospace Structures	3	AE 323 Applied Aerospace Structures	3
AE 352 Aerospace Dynamical Systems	3	AE 352 Aerospace Dynamical Systems	3
AE 353 Aerospace Control Systems	3	AE 353 Aerospace Control Systems	3
AE 370 Aerospace Numerical Methods	3	AE 370 Aerospace Numerical Methods	3
AE 433 Aerospace Propulsion	3	AE 433 Aerospace Propulsion	3
AE 442 Aerospace Systems Design I	3	AE 442 Aerospace Systems Design I	3
AE 443 Aerospace Systems Design II	3	AE 443 Aerospace Systems Design II	3
AE 460 Aerodynamics & Propulsion Lab	2	AE 460 Aerodynamics & Propulsion Lab	2
AE 461 Structures and Control Lab	2	AE 461 Structures and Control Lab	2
AE 483 Unmanned Aerial Vehicle (UAV) Navigation and Control	3	AE 483 Unmanned Aerial Vehicle (UAV) Navigation and Control	3
ECE 205 Electrical and Electronics Circuits	3	ECE 205 Electrical and Electronics Circuits	3
ECE 206 Electrical and Electronics Circuits Lab	1	ECE 206 Electrical and Electronics Circuits Lab	1
IE 300 Analysis of Data	3	IE 300 Analysis of Data	3
ME 200 Thermodynamics	2	ME 200 Thermodynamics	2
MSE 280 Engineering Materials	3	MSE 280 Engineering Materials	3
TAM 210 Introduction to Statics	2	TAM 210 Introduction to Statics	2
TAM 212 Introductory Dynamics	3	TAM 212 Introductory Dynamics	3
A T	6	Assesses Technical Flashing	6
Aerospace Technical Electives Select from department-approved list.	0	Aerospace Technical Electives Select from department-approved list.	0
Select nom department-approved list.		Select nom department-approved list.	
Other Technical Electives	6	Other Technical Electives	6
Select from department-approved list.		Select from department-approved list.	
Language Other Than English	0-15	Language Other Than English	0-15
Coursework at or above the third level is required for graduation.		Coursework at or above the third level is required for graduation.	
Humanities and the Arts	6	Humanities and the Arts	6
Select from campus-approved list.	0	Select from campus-approved list.	0
Social and Behavioral Sciences	6	Social and Behavioral Sciences	6
Select from campus-approved list.		Select from campus-approved list.	
Liberal Electives	6	Liberal Electives	6
Select from college-approved list.		Select from college-approved list.	
Cultural Studies		Cultural Studies	
Select one course from Western culture, one from non-Western		Select one course from Western culture, one from non-Western	
culture, and one from U.S. minority culture from campus approved		culture, and one from U.S. minority culture from campus approved	
lists.		lists.	
Free Fleeting		Free Electives	·
Free Electives	6	Free Electives	6
Select from college-approved list.		Select from college-approved list.	

\*AE 100 is not required but is taken by the majority of incoming students to explore their major. \*\*AE 140 is a pending course number for FA20. It is currently offered as AE 199 CAD.

RED = Course is being removed from requirements GREEN = Course addition

Date Submitted: 10/18/19 8:47 am

# Viewing: 4092 : Materials Science &

# **Engineering Minor**

Last approved: 09/12/19 3:52 pm

Last edit: 11/15/19 11:41 am

Changes proposed by: Laura Nagel

Catalog Pages Using this Program Materials Science & Engineering Minor

# In Workflow

- 1. U Program Review
- 2. 1919 Head
- 3. KP Committee Chair
- 4. KP Dean
- 5. University Librarian
- 6. Provost
- 7. Senate EPC
- 8. Senate
- 9. U Senate Conf
- 10. Board of Trustees
- 11. IBHE
- 12. DMI

# Approval Path

- 10/18/19 9:23 am Deb Forgacs (dforgacs): Approved for U Program Review
- 2. 10/18/19 9:31 am Pascal Bellon (bellon): Approved for 1919 Head
- 3. 11/13/19 7:54 amBrooke Newell(bsnewell):Approved for KPCommittee Chair
- 4. 11/13/19 10:35 am Candy Deaville (candyd): Approved for KP Dean
- 5. 11/13/19 11:59 am John Wilkin

(jpwilkin):

Approved for University Librarian

6. 11/14/19 8:57 am Kathy Martensen (kmartens): Approved for Provost

# History

- 1. Apr 23, 2019 by Deb Forgacs (dforgacs)
- 2. Sep 12, 2019 by Brooke Newell (bsnewell)

# Proposal Type

Proposal Type: Minor (ex. European Union Studies)

This proposal is for a: Revision

Proposal Title:

if this proposal is one piece of a multi-element change please include the other impacted programs here. *example: A BS revision with multiple concentration revisions* 

#### Administrative approval: Revision to minor migration update

Is this program available on campus and online?	Νο			
Official Program Name	Materials S	Science & E	ngineering Minor	
Banner/Codebook Name Materials Science a	and Enginee	ering		
Program Code:	4092			
Major Code		Minor Code	4092	Conc Code



Program	Management
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Degree Code		
EP Control Number	EP.20.42	
Senate Approval Date		
Senate Conference Approval Date		
BOT Approval Date		
IBHE Approval Date		
Effective Date:		
Effective Catalog Term	Fall 2020	
Sponsor College	Grainger College of Engineering	
Sponsor Department	Materials Science & Engineering	
Sponsor Name		Sponsor Email
College Contact		College Contact Email
Is this program inter	disciplinary?	
No		
Is this minor? A Comprehensive s	tudy in a single discipline	
Academic Level	Undergraduate	
CIP Code		
Program Descri	ption and Justification	
Justification for prop	osal change:	

Updating Materials Science and Engineering Minor to reflect changes in the MatSE undergraduate curriculum.

Is This a Teacher Certification Program? No

Will specialized accreditation be sought for this program?

No

# Enrollment

Will the department limit enrollment to the minor?

No

Describe how the department will monitor the admission to/enrollment in the minor.

#### Student must meet with Chief Advisor prior to admission to minor.

Are there any prerequisites for the proposed minor?

No

Describe how this revision will impact enrollment and degrees awarded.

#### We expect the enrollment in the minor to stay about the same.

**Delivery Method** 

This program is available: Face-to-Face

Other than certification via the students' degree audits, is there any additional planned mechanism to award/honor successful completion of the minor?

No

# Budget

Are there budgetary implications for this revision?

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

No

No

Additional Budget Information

Attach File(s)

# **Resource Implications**

#### Facilities

Will the program require new or additional facilities or significant improvements to already existing facilities?

No

#### Technology

Will the program need additional technology beyond what is currently available for the unit?

No

#### Non-Technical Resources

Will the program require additional supplies, services or equipment (non-technical)?

No

### Resources

Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

#### The proposal should have minimal impact on University Library resources.

Instructional Resources

Will there be any reduction in other course offerings, programs or concentrations by your department as a result of this new program/proposed change?

No

Does this new program/proposed change result in the replacement of another program?

No

Does the program include other courses/subjects impacted by the creation/revision of this program?

No

## **Financial Resources**

How does the unit intend to financially support this proposal?

Will the unit need to seek campus or other external resources?

No

Attach letters of support

# **Program Regulation**

Describe how the program is aligned with or meets licensure, certification, and/or entitlement requirements, if applicable.

Briefly describe the plan to assess and improve student learning, including the program's learning objectives; when, how, and where these learning objectives will be assessed; what metrics will be used to signify student's achievement of the stated learning objectives; and the process to ensure assessment results are used to improve student learning.

Is the career/profession for graduates of this program regulated by the State of Illinois?

No

# Program of Study

"Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60 quarter credit hours) in upper division courses" (source:

*https://www.ibhe.org/assets/files/PrivateAdminRules2017.pdf). For proposals for new bachelor's degrees, if this minimum is not explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.* 

An undergraduate minor should consist of at least 16 - and no more than 21 hours - of course work, with at least 6 hours of 300- or 400- level courses. Except clearly remedial offerings, prerequisite courses within the sponsoring unit count towards the total; prerequisite courses outside the sponoring unit do not count toward this total. The unit sponsoring the minor and that unit's college may set educationally necessary prerequisites for eligibility for the minor within these constraints. Does this proposal meet these criteria?

Yes

All proposals must attach the new or revised version of the Academic Catalog program of study entry. Contact your college office if you have questions.

Revised programs **Proposed changes to minor.docx** 

Attach a side-by-side comparison with the existing program AND, if the revision references or adds "chose-from" lists of courses students can select from to fulfill requirements, a listing of these courses, including the course rubric, number, title, and number of credit hours.

Catalog Page Text

#### 11/15/2019

#### **Program Management**

Catalog Page Text: Description of program for the catalog page. This is not official content, it is used to help build the catalog pages for the program. Can be edited in the catalog by the college or department.

Materials are the basis for all engineering and also are the basis for much of the research in various areas of science. The Minor in Materials Science and Engineering is designed to give students in other areas of engineering and science both a broad view of all materials as well as several courses in a particular area of materials, knowledge that will be of value whether the student pursues a career in industry, government, or academia.

The courses, listed below, have been selected to give an undergraduate student both a strong background in all types of materials as well as more detailed knowledge of particular areas of materials science and engineering (e.g., ceramics, metals, polymers, electronic materials or biomaterials).

### The following 18 credits are required:

Statement for Programs of Study Catalog

Course List

Code	Title	Hours		
Core Course Work				
<u>MSE 280</u>	Engineering Materials	3		
<u>MSE 401</u>	Thermodynamics of Materials (Other thermodynamics courses may be substituted	3		
	upon petition.)			
One additi	onal course chosen from an approved list below:	3		
<u>MSE 30</u>	<u>4</u> Electronic Properties of Matls			
<u>MSE 40</u>	<u>2</u> Kinetic Processes in Materials			
<u>MSE 40</u>	<u>3</u> Synthesis of Materials			
<u>MSE 40</u>	5 Microstructure Determination			
<u>MSE 40</u>	<u>6</u> Thermal-Mech Behavior of Matls			
Introductory Area course chosen from an approved list below:3				
Nine addi	tional hours in advanced courses selected from:	9		
<u>MSE 404</u>	Laboratory Studies in Materials Science and Engineering	1.5		
<u>MSE 420</u>	Ceramic Materials & Properties	3		
<u>MSE 421</u>	Ceramic Processing	3 or		
		4		
<u>MSE 422</u>	Electrical Ceramics	3		
Metals				
<u>MSE 440</u>	Mechanical Behavior of Metals	3		
<u>MSE 441</u>	Metals Processing	3		
<u>MSE 443</u>	Design of Engineering Alloys	3		
<u>MSE 445</u>	Corrosion of Metals	3 or		
		4		
Polymers				

11/15/2019

Title	Hours
Polymer Science & Engineering	3 or
	4
Plastics Engineering	3
Mechanics of Polymers	3
Macromolecular Solids	3
Mechanics of Composites	3
Polymer Chemistry	3 or
	4
Polymer Physics	3 or
	4
Materials	
Electronic Materials I	3
Electronic Materials II	3
Materials in Electrochem Syst	3
Design and Use of Biomaterials	3
source chosen from an approved list below:	<del>3</del>
Ceramic Processing Laboratory	
-2Metals Laboratory	
S2Polymer Laboratory	
MSE 462Electronic Materials Lab	
<sup>2</sup> Biomaterials Laboratory	
Area course chosen from one of several approved lists below:	<del>3</del>
Biomolecular Materials Science	3
Biomaterials and Nanomedicine	3
Surfaces and Colloids	3 or
	4
Electron Microscopy	3 or
	4
Composite Materials	3 or
	4
Atomic Scale Simulations	3 or
	4
P8Special Topics	
Materials for Nanotechnology	3 or
	3 or 4
Materials for Nanotechnology	4
Materials for Nanotechnology	4 3 or
Materials for Nanotechnology Optical Materials	4 3 or 4
Materials for Nanotechnology Optical Materials	4 3 or 4 3 or
	Polymer Science & Engineering Plastics Engineering Mechanics of Polymers Macromolecular Solids Mechanics of Composites Polymer Chemistry Polymer Physics Materials Electronic Materials I Electronic Materials II Materials in Electrochem Syst Design and Use of Biomaterials source chosen from an approved list below: Sceramic Processing Laboratory Sepolymer Laboratory

# **EP** Documentation

Attach Rollback/Approval Notices

## **DMI** Documentation

Attach Final Approval Notices

Attached Document

Justification for this request

Program Reviewer Comments **Kathy Martensen (kmartens) (11/15/19 8:30 am):** Admin approval: Does not change total hrs. req'd; does not restrict options for students.

Key: 126

<mark>62</mark>

EP.20.42\_original Admin Approval #A4

Date Submitted: 09/11/19 4:08 pm

# Viewing: 10KR0261BA : Dance, BA

Last approved: 02/05/19 5:28 pm Last edit: 11/15/19 11:49 am

Changes proposed by: Nicole Turner

### Dance, BA

Catalog Pages Using this Program

## In Workflow

- 1. U Program Review
- 2. 1801 Head
- 3. KR Dean
- 4. University Librarian
- 5. Provost

### 6. Senate EPC

- 7. Senate
- 8. U Senate Conf
- 9. Board of Trustees
- 10. IBHE
- 11. DMI

# Approval Path

- 1. 09/11/19 4:46 pm Deb Forgacs (dforgacs): Approved for U Program Review
- 2. 11/12/19 2:19 pm Jan Erkert (erkert): Approved for 1801 Head
- 3. 11/14/19 1:42 pm Nicole Turner (nicturn): Approved for KR Dean
- 4. 11/14/19 2:48 pm John Wilkin (jpwilkin): Approved for University Librarian
- 5. 11/15/19 10:05 am Kathy Martensen (kmartens): Approved for

Provost



## History

1. Feb 5, 2019 by Deb Forgacs (dforgacs)

# Proposal Type

Proposal Type: Major (ex. Special Education)

This proposal is for a:

### Revision

Proposal Title:

if this proposal is one piece of a multi-element change please include the other impacted programs here. *example: A BS revision with multiple concentration revisions* 

Administrative approval: Transistion admin Approval: Add DANC 125, Black Dances of Resistance 200, Explore Music through Dance (3 hours) to the list of elective options for of Theory/Pedagogy/History courses. courses from which students are to select 12 hours. Update and clarify DANC 497 as senior capstone project. The addition of this course expands the range of choices for students and does not change the number of hours required for the degree.

Is this program available on campus and online?	No		
Official Program Name	Dance, BA		
Banner/Codebook Name BA:Dance -UIUC			
Corresponding Degree	BA Bachelor of Arts		
Program Code:	10KR0261BA		
Major 0261 Code	Minor Code	Conc Code	Degree Code
BA			



11/15/2019

Program Management	Program	Management
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	Program Management	
EP Control Number	EP.20.42 <del>ep.19.31</del>	
Senate Approval Date	<del>12/10/18</del>	
Senate Conference Approval Date	<del>1/24/19</del>	
BOT Approval Date	<del>n/a</del>	
IBHE Approval Date	<del>n/a</del>	
Effective Date:	<del>1/28/19</del>	
Effective Catalog Term	Spring 2020	
Sponsor College	Fine & Applied Arts	
Sponsor Department	Dance	
Sponsor Name jtoenjes@illinois.	John Toenjes .edu	Sponsor Email
Sponsor Name	-	Sponsor Email College Contact Email
Sponsor Name jtoenjes@illinois.	edu Nicole Turner	College Contact
Sponsor Name jtoenjes@illinois. College Contact	edu Nicole Turner edu	College Contact
Sponsor Name jtoenjes@illinois. College Contact nicturn@illinois.e	edu Nicole Turner edu	College Contact
Sponsor Name jtoenjes@illinois. College Contact nicturn@illinois.e Is this program inter	edu Nicole Turner edu	College Contact
Sponsor Name jtoenjes@illinois. College Contact nicturn@illinois.e Is this program inter No	edu Nicole Turner edu rdisciplinary?	College Contact
Sponsor Name jtoenjes@illinois. College Contact nicturn@illinois.e Is this program inter No Academic Level Will you admit to the concentration	edu Nicole Turner edu rdisciplinary?	College Contact
Sponsor Name jtoenjes@illinois. College Contact nicturn@illinois.e Is this program inter No Academic Level Will you admit to the concentration directly? Is a concentration required for	edu Nicole Turner edu rdisciplinary?	College Contact

Justification for proposal change:

Add DANC 125, Black Dances of Resistance (3 hours) to the list of Theory/Pedagogy/History courses from which students are to select 12 hours. The addition of this course expands the range of choices for students and does not change the number of hours required for the degree.

DANC 497 course changes were recently approved regarding credit hours and repeatability, which has been clarified on the catalog page as the senior capstone project. Transistion admin Approval:

Is This a Teacher Certification Program? No

Will specialized accreditation be sought for this program?

No

# Admission Requirements

Desired Admissions Term

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

Describe how critical academic functions such as admissions and student advising are managed.

## Enrollment

Describe how this revision will impact enrollment and degrees awarded.

### Transistion admin Approval:

Estimated Annual Number of Degrees Awarded

Year One Estimate

5th Year Estimate (or when fully implemented)

What is the
matriculation
term for this
program?

Fall

Delivery Method

This program is available: Face-to-Face

Are there budgetary implications for this revision?

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

No

No

Additional Budget Information

Attach File(s)

# **Resource Implications**

Facilities

Will the program require new or additional facilities or significant improvements to already existing facilities?

No

Technology

Will the program need additional technology beyond what is currently available for the unit?

Non-Technical Resources

Will the program require additional supplies, services or equipment (non-technical)?

No

Resources

Faculty Resources

#### Program Management

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc. Describe how the unit will support student advising, including job placement and/or admission to advanced studies.

### Transistion admin Approval:

### Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

### Transistion admin Approval:

### Instructional Resources

Will there be any reduction in other course offerings, programs or concentrations by your department as a result of this new program/proposed change?

No

Does this new program/proposed change result in the replacement of another program?

No

Does the program include other courses/subjects impacted by the creation/revision of this program?

No

# **Financial Resources**

How does the unit intend to financially support this proposal?

Will the unit need to seek campus or other external resources?

No

Attach letters of support

Will an existing tuition rate be used or continue to be used for this program?

Yes

# Program Regulation

Describe how the program is aligned with or meets licensure, certification, and/or entitlement requirements, if applicable.

11/15/2019

#### **Program Management**

Briefly describe the plan to assess and improve student learning, including the program's learning objectives; when, how, and where these learning objectives will be assessed; what metrics will be used to signify student's achievement of the stated learning objectives; and the process to ensure assessment results are used to improve student learning.

Is the career/profession for graduates of this program regulated by the State of Illinois?

No

# Program of Study

"Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60 quarter credit hours) in upper division courses" (source:

https://www.ibhe.org/assets/files/PrivateAdminRules2017.pdf). For proposals for new bachelor's degrees, if this minimum is not explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.

All proposals must attach the new or revised version of the Academic Catalog program of study entry. Contact your college office if you have questions.

Revised programs ep1931.pdf

## SIDE BY SIDE TO ADD DANC 125, edit DANC 497.docx

Attach a side-by-side comparison with the existing program AND, if the revision references or adds "chose-from" lists of courses students can select from to fulfill requirements, a listing of these courses, including the course rubric, number, title, and number of credit hours.

Catalog Page Text

Catalog Page Text: Description of program for the catalog page. This is not official content, it is used to help build the catalog pages for the program. Can be edited in the catalog by the college or department.

Statement for Programs of Study Catalog

# Minimum hours required for graduation: 120 hours

	Course List	
	Code Title	Hours
	General Education Requirements	
	Composition I	4-6
	Advanced Composition	3-4
	Humanities & the Arts	6-8
	Social & Behavioral Sciences	6-8
	Cultural Studies: Non-Western Cultures	3-4
h	https://nextcourses.illinois.edu/programadmin/	<b>69</b> /10

11/15/2019
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Cultural Studies: U.S. Minority Cultures 3-4 Cultural Studies: Western/Comparative Culture(s) 3-4 Natural Sciences & Technology 6-10 Quantitative Reasoning 6-9 The Language Requirement may be satisfied by: -Successfully completing a third-semester college-level course in a language other than English; -Successfully completing a third-semester college-level course in a language other than English; -Successfully completing a third-semester level in a language other than English; or -Demonstrating proficiency at the third-semester level in a language proficiency examination approved by the College of Liberal Arts and Sciences and the appropriate department. Foundation Courses FAA 101 Arts at Illinols 1 DANC 150 Orientation to Dance 2 Course List Code Title Hours Technique/Physical Practice 18 DANC 260 Int Contemp Modern Tech Core (1-3 hours per enrollment, repeatable) 1 4 Choose from the following: 10 DANC 160 Beg Contemp Modern Tech Core 1 DANC 260 Int Contemp Modern Tech Core 1 DANC 260 Intrometiate Ballet Tech Core DANC 260 Int/Adv Contemp Modern Tech Core DANC 260 Adv Contemp Modern Tech Core DANC 460 Advanced Ballet Tech Core DANC 460 Advanced Ballet Tech Core DANC 460 Advanced Bal		Code	Title	Hours
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DANC 215       Int Tap Dance Technique         DANC 261       Int Contemp Modern Tech Elect         DANC 266       Intermediate Ballet Tech Core         DANC 267       Intermediate Ballet Tech Elect         DANC 301       Yoga Fundamentals         DANC 310       World Dance Forms         DANC 360       Int/Adv Contemp Mod Tech Core         DANC 361       Int/Adv Contemp Mod Tech Elect         DANC 366       Int/Adv Contemp Mod Tech Elect         DANC 367       Int/Adv Ballet Tech Core         DANC 368       Int/Adv Ballet Tech Elect         DANC 369       Int/Adv Ballet Tech Core         DANC 401       Alexander Tech for Dancers         DANC 410       Alexander Technique Practicum         DANC 410       Advanced Jazz Technique         DANC 410       Advanced Jazz Technique         DANC 410       Advanced Jazz Technique         DANC 410       Advanced Ballet Tech Core         DANC 460       Adv Contemp Modern Tech Elect (Modernvariable credit)         DANC 461       Advanced Ballet Tech Core         DANC 462       Advanced Ballet Tech Core         DANC 464       Advanced Ballet Tech Core         DANC 465       Advanced Ballet Tech Core         DANC 462       Advanced Ballet Tech Co				
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DANC 266Intermediate Ballet Tech CoreDANC 267Intermediate Ballet Tech ElectDANC 301Yoga FundamentalsDANC 310World Dance FormsDANC 360Int/Adv Contemp Mod Tech CoreDANC 361Int/Adv Contemp Mod Tech ElectDANC 366Int/Adv Ballet Tech CoreDANC 367Int/Adv Ballet Tech ElectDANC 401Alexander Tech for DancersDANC 402Alexander Technique PracticumDANC 410Advanced Jazz TechniqueDANC 460Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 465Advanced Ballet Tech Elect (variable credit)DANC 466Advanced Ballet Tech Elect (variable credit)DANC 467Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I270				
DANC 267Intermediate Ballet Tech ElectDANC 301Yoga FundamentalsDANC 310World Dance FormsDANC 360Int/Adv Contemp Mod Tech CoreDANC 361Int/Adv Contemp Mod Tech ElectDANC 366Int/Adv Ballet Tech CoreDANC 367Int/Adv Ballet Tech ElectDANC 401Alexander Tech for DancersDANC 402Alexander Technique PracticumDANC 410Advanced Jazz TechniqueDANC 450Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech CoreDANC 462Advanced Ballet Tech Elect (Modernvariable credit)DANC 465Advanced Ballet Tech CoreDANC 467Advanced Ballet Tech Elect (variable credit)DANC 462Choreographic Process I22			•	
DANC 301Yoga FundamentalsDANC 310World Dance FormsDANC 360Int/Adv Contemp Mod Tech CoreDANC 361Int/Adv Contemp Mod Tech ElectDANC 366Int/Adv Ballet Tech CoreDANC 367Int/Adv Ballet Tech ElectDANC 401Alexander Tech for DancersDANC 402Alexander Technique PracticumDANC 410Advanced Jazz TechniqueDANC 460Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 466Advanced Ballet Tech Elect (variable credit)DANC 467Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I2				
DANC 310World Dance FormsDANC 360Int/Adv Contemp Mod Tech CoreDANC 361Int/Adv Contemp Mod Tech ElectDANC 366Int/Adv Ballet Tech CoreDANC 367Int/Adv Ballet Tech ElectDANC 401Alexander Tech for DancersDANC 402Alexander Technique PracticumDANC 410Advanced Jazz TechniqueDANC 411Adv Hip Hop TechniqueDANC 460Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 465Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I2				
DANC 360Int/Adv Contemp Mod Tech CoreDANC 361Int/Adv Contemp Mod Tech ElectDANC 366Int/Adv Ballet Tech CoreDANC 367Int/Adv Ballet Tech ElectDANC 401Alexander Tech for DancersDANC 402Alexander Technique PracticumDANC 410Advanced Jazz TechniqueDANC 460Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 462Advanced Ballet Tech Elect (variable credit)DANC 463Advanced Ballet Tech Elect (variable credit)DANC 465Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I2				
DANC 361Int/Adv Contemp Mod Tech ElectDANC 366Int/Adv Ballet Tech CoreDANC 367Int/Adv Ballet Tech ElectDANC 401Alexander Tech for DancersDANC 402Alexander Technique PracticumDANC 410Advanced Jazz TechniqueDANC 411Adv Hip Hop TechniqueDANC 460Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 465Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I20		<u>DANC 310</u>	World Dance Forms	
DANC 366Int/Adv Ballet Tech CoreDANC 367Int/Adv Ballet Tech ElectDANC 401Alexander Tech for DancersDANC 402Alexander Technique PracticumDANC 410Advanced Jazz TechniqueDANC 411Adv Hip Hop TechniqueDANC 460Adv Contemp Modern Tech CoreDANC 461Advanced Ballet Tech Elect (Modernvariable credit)DANC 466Advanced Ballet Tech CoreDANC 467Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I2070		<u>DANC 360</u>	Int/Adv Contemp Mod Tech Core	
DANC 367Int/Adv Ballet Tech ElectDANC 401Alexander Tech for DancersDANC 402Alexander Technique PracticumDANC 410Advanced Jazz TechniqueDANC 411Adv Hip Hop TechniqueDANC 460Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 466Advanced Ballet Tech CoreDANC 467Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I270		<u>DANC 361</u>	Int/Adv Contemp Mod Tech Elect	
DANC 401Alexander Tech for DancersDANC 402Alexander Technique PracticumDANC 410Advanced Jazz TechniqueDANC 411Adv Hip Hop TechniqueDANC 460Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 466Advanced Ballet Tech CoreDANC 467Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I2		<u>DANC 366</u>	Int/Adv Ballet Tech Core	
DANC 402Alexander Technique PracticumDANC 410Advanced Jazz TechniqueDANC 411Adv Hip Hop TechniqueDANC 460Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 466Advanced Ballet Tech CoreDANC 467Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I270		<u>DANC 367</u>	Int/Adv Ballet Tech Elect	
DANC 410Advanced Jazz TechniqueDANC 411Adv Hip Hop TechniqueDANC 460Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 466Advanced Ballet Tech CoreDANC 467Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I270		<u>DANC 401</u>	Alexander Tech for Dancers	
DANC 411Adv Hip Hop TechniqueDANC 460Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 466Advanced Ballet Tech CoreDANC 467Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I270		DANC 402	Alexander Technique Practicum	
DANC 460Adv Contemp Modern Tech CoreDANC 461Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 466Advanced Ballet Tech CoreDANC 467Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262Choreographic Process I270		<u>DANC 410</u>	Advanced Jazz Technique	
DANC 461 DANC 466Adv Contemp Modern Tech Elect (Modernvariable credit)DANC 466 DANC 467Advanced Ballet Tech CoreDANC 467 Creative Process/Performance and Production11DANC 262 Choreographic Process I270		<u>DANC 411</u>	Adv Hip Hop Technique	
DANC 466 DANC 467Advanced Ballet Tech CoreDANC 467 DANC 467Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262 Choreographic Process I270		<u>DANC 460</u>	Adv Contemp Modern Tech Core	
DANC 466 DANC 467Advanced Ballet Tech CoreDANC 467 DANC 467Advanced Ballet Tech Elect (variable credit)Creative Process/Performance and Production11DANC 262 Choreographic Process I270		DANC 461		
DANC 467       Advanced Ballet Tech Elect (variable credit)         Creative Process/Performance and Production       11         DANC 262       Choreographic Process I       2         70				
Creative Process/Performance and Production       11         DANC 262       Choreographic Process I       2         70				
DANC 262       Choreographic Process I       2         70				11
70				
https://nextcourses.illinois.edu/programadmin/		<u></u>		70
	h	ttps://nextcourses.illino	is.edu/programadmin/	8/10

11/15/2019

Code	Title	Hours
DANC 362	Choreographic Process II	2
Choose 2 fron	the following Improvisation courses:	
DANC 259	Contact Improv for Act/Mus/Dan	
DANC 363	Advanced Improvisation	
<u>DANC 459</u>	Contact Improv Act/Mus/Dan II	
Choose 2 fron	the following Performance courses:	2
DANC 232	Repertory Company	
<u>DANC 220</u>	Perf Pract Student Works I	
<u>DANC 221</u>	Performance in Grad Thesis I	
<u>DANC 222</u>	Perf Pract November I	
DANC 223	Perf Pract February I	
<u>DANC 420</u>	Perf Pract Student Works II	
<u>DANC 421</u>	Performance in Grad Thesis II	
<u>DANC 422</u>	Perf Pract November II	
DANC 423	Perf Pract February II (Variable)	
<u>DANC 424</u>	Collaborative Performance	
Choose 3 fron	n the following Production courses:	3
<u>DANC 131</u>	Production Practicum I	
DANC 231	Production Practicum II	
DANC 330	Dance Documentation (variable credits)	
	Production Practicum III	
DANC 431	Production Practicum IV	
Dance Acader	nics	18
Choose 6 hou	rs from the following History courses:	6
DANC 100	Intro to Contemporary Dance	
	Dance History	
	Dance History Seminar	
	urs from the following Theory/Pedagogy/History courses:	12
	Black Dances of Resistance	
DANC 200	Explore Music through Dance	
	Dance History Seminar (if not selected above)	
DANC 340		
	Viewing Dance	
DANC 268	-	
DANC 245		
	Dance Anatomy and Kinesiology	
	Teaching Workshop	
	Creative Dance for Children	
	Production in Dance	
	Undergraduate Open Seminar	
	Ind Study and Special Topics	
Senior Capsto		3
DANC 497	BA Capstone Project 2	3
	Dance classes, chosen in consultation with an advisor	15
	s as needed to total 120 hours minimum	120
		74
ps://nextcourses.illing	is.edu/programadmin/	9/1

#### Program Management

 DANC 160 and 260 must be taken for at least 4 hours each but are repeatable beyond 4 hours.
 2Students will enroll in one credit hour of DANC 497, BA Capstone Project in fall of their senior year and two credit hours of DANC 497 in spring of their senior year for a total of three credit hours.

## **EP** Documentation

Attach Rollback/Approval Notices

## **DMI** Documentation

Attach FinalImplementationAdd course to requirements for BA degree.pdfApproval Notices

Attached Document

Justification for this request

Program Reviewer

Comments

**Deb Forgacs (dforgacs) (09/11/19 3:45 pm):** Rollback: side-by-side comparison **Kathy Martensen (kmartens) (11/15/19 10:05 am):** Admin approval: Does not change total hrs. req'd for the program, does not restrict options for students.

Key: 132

# 10KR0261BA : Dance, BA

Side-by-side to show: addition of DANC 125 (PG 4) DANC 497 clarification (PG 4)

## PREVIOUS

#### Minimum hours required for graduation: 120 hours

Code	Title	Hours
<b>General Education</b>	Requirements	
Composition I		4-6
Advanced Compo	sition	3-4
Humanities & the	Arts	6-8
Social & Behavior	al Sciences	6-8
Cultural Studies:	Non-Western Cultures	3-4
Cultural Studies:	U.S. Minority Cultures	3-4
Cultural Studies: Culture(s)	Western/Comparative	3-4
Natural Sciences	& Technology	6-10
Quantitative Reas	soning	6-9
The Language Re satisfied by:	quirement may be	
-Successfully com semester college- language other th	level course in a	

-Successful completion, in high school, of the third year of a language other than English; or

-Demonstrating proficiency at the thirdsemester level in a language proficiency examination approved by the College of Liberal Arts and Sciences and the appropriate department.

## NEW

Minimum hours required for graduation: 120 hours

Code	Title	Hours
General Educatio	on Requirements	
Composition I		4-6
Advanced Com	position	3-4
Humanities & t	he Arts	6-8
Social & Behav	ioral Sciences	6-8
Cultural Studies	s: Non-Western Cultures	3-4
Cultural Studie	s: U.S. Minority Cultures	3-4
Cultural Studies Culture(s)	s: Western/Comparative	3-4
Natural Science	es & Technology	6-10
Quantitative Re	easoning	6-9
The Language satisfied by:	Requirement may be	
•	ompleting a third- ge-level course in a than English;	
	npletion, in high school, ir of a language other r	
semester level	proficiency at the third- in a language proficiency proved by the College of	

semester level in a language proficiency examination approved by the College of Liberal Arts and Sciences and the appropriate department.

## PREVIOUS

# NEW

Foundation Courses			Foundation C	ourses	
<u>FAA 101</u>	Arts at Illinois		<u>FAA 101</u>	Arts at Illinois	
<u>DANC 150</u>	Orientation to Dance		DANC 150	Orientation to Dance	
Technique/P	hysical Practice	18	Technique/P	hysical Practice	18
<u>DANC 160</u>	Beg Contemp Modern Tech Core hours per enrollment, repeatable	•	DANC 160	Beg Contemp Modern Tech Core hours per enrollment, repeatable	
DANC 260	Int Contemp Modern Tech Core ( hours per enrollment, repeatable		DANC 260	Int Contemp Modern Tech Core ( hours per enrollment, repeatable	
Choose from	n the following:	10	Choose from	the following:	10
<u>DANC 160</u> B	eg Contemp Modern Tech Core 1		<u>DANC 160</u> B	eg Contemp Modern Tech Core 1	
<u>DANC 166</u>	Beginning Ballet Tech Core		DANC 166	Beginning Ballet Tech Core	
<u>DANC 167</u>	Beginning Ballet Tech Elect		DANC 167	Beginning Ballet Tech Elect	
<u>DANC 260</u> I	nt Contemp Modern Tech Core 1		<u>DANC 260</u> I	nt Contemp Modern Tech Core 1	
<u>DANC 210</u>	Int Jazz Technique		DANC 210	Int Jazz Technique	
<u>DANC 211</u>	Int Hip Hop Technique		DANC 211	Int Hip Hop Technique	
DANC 215	Int Tap Dance Technique		DANC 215	Int Tap Dance Technique	
<u>DANC 261</u>	Int Contemp Modern Tech Elect		DANC 261	Int Contemp Modern Tech Elect	
DANC 266	Intermediate Ballet Tech Core		DANC 266	Intermediate Ballet Tech Core	
DANC 267	Intermediate Ballet Tech Elect		DANC 267	Intermediate Ballet Tech Elect	
DANC 301	Yoga Fundamentals		DANC 301	Yoga Fundamentals	
<u>DANC 310</u>	World Dance Forms		DANC 310	World Dance Forms	
DANC 360	Int/Adv Contemp Mod Tech Core	2	DANC 360	Int/Adv Contemp Mod Tech Core	
DANC 361	Int/Adv Contemp Mod Tech Elect	t	DANC 361	Int/Adv Contemp Mod Tech Elect	•
DANC 366	Int/Adv Ballet Tech Core		DANC 366	Int/Adv Ballet Tech Core	
DANC 367	Int/Adv Ballet Tech Elect		DANC 367	Int/Adv Ballet Tech Elect	
<u>DANC 401</u>	Alexander Tech for Dancers		DANC 401	Alexander Tech for Dancers	
DANC 402	Alexander Technique Practicum		DANC 402	Alexander Technique Practicum	
<u>DANC 410</u>	Advanced Jazz Technique		DANC 410	Advanced Jazz Technique	
DANC 411	Adv Hip Hop Technique		DANC 411	Adv Hip Hop Technique	
DANC 460	Adv Contemp Modern Tech Core		DANC 460	Adv Contemp Modern Tech Core	
<u>DANC 461</u>	Adv Contemp Modern Tech Elect (Modernvariable credit)		DANC 461	Adv Contemp Modern Tech Elect (Modernvariable credit)	
<u>DANC 466</u>	Advanced Ballet Tech Core		DANC 466	Advanced Ballet Tech Core	
<u>DANC 467</u>	Advanced Ballet Tech Elect (varia credit)	able	DANC 467	Advanced Ballet Tech Elect (varia credit)	able

# PREVIOUS

Creative Process/Performance and Production 11				
DANC 262	Choreographic Process I			
DANC 362	Choreographic Process II			
Choose 2 fro courses:	om the following Improvisation			
<u>DANC 259</u>	Contact Improv for Act/Mus/Dan			
DANC 363	Advanced Improvisation			
<u>DANC 459</u>	Contact Improv Act/Mus/Dan II			
Choose 2 fro courses:	om the following Performance			
<u>DANC 232</u>	Repertory Company			
<u>DANC 220</u>	Perf Pract Student Works I			
<u>DANC 221</u>	Performance in Grad Thesis I			
<u>DANC 222</u>	Perf Pract November I			
DANC 223	Perf Pract February I			
DANC 420	Perf Pract Student Works II			
DANC 421	Performance in Grad Thesis II			
DANC 422	Perf Pract November II			
DANC 423	Perf Pract February II (Variable)			
DANC 424	Collaborative Performance			
Choose 3 fro	om the following Production courses:3			
DANC 131	Production Practicum I			
DANC 231	Production Practicum II			
DANC 330	Dance Documentation (variable credits)			
DANC 331	Production Practicum III			
DANC 431	Production Practicum IV			

	NEW
Creative Proce	ess/Performance and Production 11
DANC 262	Choreographic Process I
DANC 362	Choreographic Process II
Choose 2 fro courses:	m the following Improvisation
<u>DANC 259</u>	Contact Improv for Act/Mus/Dan
DANC 363	Advanced Improvisation
DANC 459	Contact Improv Act/Mus/Dan II
Choose 2 fro courses:	m the following Performance
DANC 232	Repertory Company
DANC 220	Perf Pract Student Works I
DANC 221	Performance in Grad Thesis I
DANC 222	Perf Pract November I
DANC 223	Perf Pract February I
DANC 420	Perf Pract Student Works II
DANC 421	Performance in Grad Thesis II
DANC 422	Perf Pract November II
DANC 423	Perf Pract February II (Variable)
DANC 424	Collaborative Performance
Choose 3 fro courses:	m the following Production 3
DANC 131	Production Practicum I
DANC 231	Production Practicum II
DANC 330	Dance Documentation (variable credits)
DANC 331	Production Practicum III

Dance Academ	PREVIOUS	18
Choose 6 hou courses:	urs from the following History	6
DANC 100	Intro to Contemporary Dance	
DANC 240	Dance History	
DANC 441	Dance History Seminar	
	ours from the following gogy/History courses:	12
DANC 200	Explore Music through Dance	
<u>DANC 441</u>	Dance History Seminar (if not selected above)	
DANC 340	Dancing Black Popular Culture	
DANC 400	Viewing Dance	
DANC 268	Music Theory for Dancers	
DANC 245	Introduction to Somatics	
DANC 345	Dance Anatomy and Kinesiology	
DANC 450	Teaching Workshop	
DANC 350	Creative Dance for Children	
DANC 375	Production in Dance	
DANC 199	Undergraduate Open Seminar	
DANC 451	Ind Study and Special Topics	
Senior Capsto	ne Project <sup>2</sup>	3
Hours in non- with an adviso	Dance classes, chosen in consultation or	15
Open electives minimum	s as needed to total 120 hours	120
Course List		
	260 must be taken for at least 4 hours eac	ch
-	able beyond 4 hours. nior Capstone Project, is a new course	

DANC 497, Senior Capstone Project, is a new course expected to be available by the start of the Fall, 2015 semester.

2

Dance Academics 18					
Choose 6 ho courses:	urs from the following History	6			
DANC 100	Intro to Contemporary Dance				
DANC 240	Dance History				
DANC 441	Dance History Seminar				
	ours from the following gogy/History courses:	12			
DANC 125	Black Dances of Resistance				
DANC 200	Explore Music through Dance				
<u>DANC 441</u>	Dance History Seminar (if not selected above)				
DANC 340	Dancing Black Popular Culture				
DANC 400	Viewing Dance				
DANC 268	Music Theory for Dancers				
DANC 245	Introduction to Somatics				
DANC 345	Dance Anatomy and Kinesiology				
DANC 450	Teaching Workshop				
DANC 350	Creative Dance for Children				
DANC 375	Production in Dance				
<u>DANC 199</u>	Undergraduate Open Seminar				
<u>DANC 451</u>	Ind Study and Special Topics				
<u>DANC 497</u>	BA Capstone Project <sup>2</sup>	<mark>3</mark>			
Hours in non- with an advise	Dance classes, chosen in consultation or	15			
Open elective minimum	s as needed to total 120 hours	120			
Course List DANC 160 and 260 must be taken for at least 4 hours each but are repeatable beyond 4 hours.					
Students will enroll in one credit hour of DANC 497, BA Capstone Project in fall of their senior year and two credit hours of DANC 497 in spring of their senior year for a total of three credit hours.					

Date Submitted: 11/13/19 10:11 am

# Viewing: 10KL5560BS : Crop Sciences: Horticultural Food Systems, BS

Last approved: 11/12/19 4:54 pm Last edit: 11/15/19 2:06 pm Changes proposed by: Scott Bartlett

Crop Sciences: Horticultural Food Systems, BS

Catalog Pages Using this Program

# In Workflow

- 1. U Program Review
- 2. 1802 Committee Chair
- 3. 1802 Head
- 4. KL Committee Chair
- 5. KL Dean
- 6. University Librarian
- 7. Provost
- 8. Senate EPC
- 9. Senate
- 10. U Senate Conf
- 11. Board of Trustees
- 12. IBHE
- 13. DMI

# Approval Path

- 11/13/19 11:18
   am
   Deb Forgacs
   (dforgacs):
   Approved for U
   Program Review
   11/13/19 11:36
- am Lane Rayburn (arayburn): Approved for 1802 Committee Chair
- 3. 11/13/19 5:13 pm Adam Davis (asdavis1): Approved for 1802 Head
- 4. 11/14/19 11:27 am Anthony Yannarell (acyann):

Approved for KL Committee Chair

- 5. 11/14/19 12:20 pm Anna Ball (aball): Approved for KL Dean
- 6. 11/14/19 2:48 pm John Wilkin (jpwilkin): Approved for University Librarian
- 7. 11/15/19 10:05

  am
  Kathy Martensen
  (kmartens):
  Approved for
  Provost

# History

- 1. Jan 18, 2019 by Deb Forgacs (dforgacs)
- Nov 12, 2019 by Deb Forgacs (dforgacs)

# Proposal Type

Proposal Type: Concentration (ex. Dietetics)

This proposal is for a: Revision

Proposal Title:

if this proposal is one piece of a multi-element change please include the other impacted programs here. *example: A BS revision with multiple concentration revisions* 

# Administrative approval: Update Crop Sciences concentration to remove deactivated course. Admin save correct title.

Is this program No available on

11/15/2019	Pr	rogram Management		
campus and online?				
Official Program Name	Crop Sciences: Horticultural F	ood Systems, I	BS	
Banner/Codebook Name BS:Crop Sciences -	HFS -UIUC			
Program Code:	10KL5560BS			
Major 0030 Code	Minor Code		Conc Code	5560 Degree Code
EP Control Number	EP.20.42 EP.19.11			
Senate Approval Date				
Senate Conference Approval Date				
BOT Approval Date				
IBHE Approval Date				
Effective Date:				
Effective Catalog Term	Fall 2019			
Sponsor College	Agr, Consumer, & Env Science	S		
Sponsor Department	Crop Sciences			
Sponsor Name			Sponsor E	mail
College Contact			College Co Email	ntact
Is this program inter	disciplinary?			
No				

11/15/2019

Corresponding	
Program(s):	

Corresponding Program(s)

Crop Sciences, BS

Academic Level Undergraduate

Additional concentration notes (e.g., estimated enrollment, advising plans, etc.)

CIP Code

## Program Description and Justification

Justification for proposal change:

# Crop Sciences has deactivated HORT 298. We are removing this course from the list of options within the concentration.

Is This a Teacher Certification Program?

No

No

Will specialized accreditation be sought for this program?

No

# Enrollment

Describe how this revision will impact enrollment and degrees awarded.

**Delivery Method** 

This program is available: Face-to-Face

## Budget

Are there budgetary implications for this revision?

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

No

Additional Budget Information

Attach File(s)

# **Resource Implications**

### Facilities

Will the program require new or additional facilities or significant improvements to already existing facilities?

No

## Technology

Will the program need additional technology beyond what is currently available for the unit?

No

## Non-Technical Resources

Will the program require additional supplies, services or equipment (non-technical)?

No

## Resources

## Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc. Describe how the unit will support student advising, including job placement and/or admission to advanced studies.

## Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

Instructional Resources

Will there be any reduction in other course offerings, programs or concentrations by your department as a result of this new program/proposed change?

No

Does this new program/proposed change result in the replacement of another program?

No

Does the program include other courses/subjects impacted by the creation/revision of this program?

No

## **Financial Resources**

How does the unit intend to financially support this proposal?

See attached.

Will the unit need to seek campus or other external resources?

No

Attach letters of support

# **Program Regulation**

Describe how the program is aligned with or meets licensure, certification, and/or entitlement requirements, if applicable.

Briefly describe the plan to assess and improve student learning, including the program's learning objectives; when, how, and where these learning objectives will be assessed; what metrics will be used to signify student's achievement of the stated learning objectives; and the process to ensure assessment results are used to improve student learning.

See attached.

Is the career/profession for graduates of this program regulated by the State of Illinois?

No

# Program of Study

"Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60 quarter credit hours) in upper division courses" (source:

*https://www.ibhe.org/assets/files/PrivateAdminRules2017.pdf). For proposals for new bachelor's degrees, if this minimum is not explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.* 

All proposals must attach the new or revised version of the Academic Catalog program of study entry. Contact your college office if you have questions.

Revised programs Attach a side-by-side comparison with the existing program AND, if the revision references or adds "chose-from" lists of courses students can select from to fulfill requirements, a listing

#### Program Management

of these courses, including the course rubric, number, title, and number of credit hours.

Catalog Page Text

Catalog Page Text: Description of program for the catalog page. This is not official content, it is used to help build the catalog pages for the program. Can be edited in the catalog by the college or department.

Statement for Programs of Study Catalog

# **Concentration Requirements**

	Course List	
Code	Title	Hours
Natural Science and Technolo	gy Required	15-16
<u>CHEM 102</u>	General Chemistry I	
& <u>CHEM 103</u>	and General Chemistry Lab I	
<u>CHEM 104</u>	General Chemistry II	
& <u>CHEM 105</u>	and General Chemistry Lab II	
<u>CHEM 232</u>	Elementary Organic Chemistry I	
or <u>CPSC 382</u>	Organic Chem of Biol Processes	
<u>IB 103</u>	Introduction to Plant Biology	
Concentration Required Core	Courses:	28
<u>CPSC 102</u>	Research in Crop Sciences	
<u>CPSC 226</u>	Introduction to Weed Science	
<u>CPSC 270</u>	Applied Entomology	
<u>CPSC 498</u>	Crop Sci Professional Develpmt	
<u>HORT 100</u>	Introduction to Horticulture	
<u>HORT 240</u>	Plant Propagation	
<u>HORT 360</u>	Vegetable Crop Production	
<u>HORT 361</u>	Small Fruit Production	
<u>HORT 362</u>	Tree Fruit Production	
<u>NRES 201</u>	Introductory Soils	
<u>PLPA 204</u>	Introductory Plant Pathology	
Select 7 or 8 hours from the	following specialized courses:	7-8
<u>CPSC 352</u>	Plant Genetics	
<u>HORT 341</u>	Greenhouse Mgmt and Production	
<u>HORT 442</u>	Plant Nutrition	
<u>CPSC 484</u>	Plant Physiology	
or <u>IB 420</u>	Plant Physiology	
<u>NRES 438</u>	Soil Nutrient Cycling	
or <u>NRES 488</u>	Soil Fertility and Fertilizers	
Select 15 hours from the follo	owing focus area electives:	15
<u>ACE 231</u>	Food and Agribusiness Mgt	
<u>CPSC 261</u>	Biotechnology in Agriculture	

11/15/2019

/15/2019	Program Management	
Code	Title	Hours
<u>CPSC 431</u>	Plants and Global Change	
<u>CPSC 437</u>	Principles of Agroecology	
<u>HORT 180</u>	Medicinal Plants and Herbology	
<u>HORT 205</u>	Local Food Networks	
HORT 298	Course HORT 298 Not Found	
HORT 301	Woody Landscape Plants	
<u>HORT 341</u>	Greenhouse Mgmt and Production 1	
HORT 344	Planting for Biodiversity and Aesthetics	
HORT 363	Postharvest Handling Hort Crop	
<u>HORT 421</u>	Horticultural Physiology 1	
<u>HORT 434</u>	Designing Urban Agriculture	
<u>HORT 435</u>	Urban Food Production	
<u>HORT 442</u>	Plant Nutrition 1	
<u>HORT 447</u>	Horticultural Plant Breeding	
<u>HORT 475</u>	Permaculture & Agroforestry	
<u>TSM 311</u>	Humanity in the Food Web	
Total ACES prescribed	d and elective hours must total 35 hours, of which 20 must be com	pleted

in residence.

Total Required Concentration Hours:

1 May only be applied here if not used as a Specialized Course.

# **EP** Documentation

Attach Rollback/Approval Notices

# **DMI** Documentation

Attach Final **Approval Notices** 

Attached Document

Justification for this request

**Program Reviewer** 

Comments

## Kathy Martensen (kmartens) (11/15/19 10:05 am): Admin approval, does not change total hrs. req'd, does not restrict options for students.

Key: 536

50-51

## UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Office of the Provost and Vice Chancellor for Academic Affairs

Swanlund Administration Building 601 East John Street Champaign, IL 61820 1867

September 21, 2018

Gay Miller, Chair Senate Committee on Educational Policy Office of the Senate 228 English Building, MC-461

Dear Professor Miller:

Enclosed is a copy of a proposal from the College of Agricultural, Consumer and Environmental Sciences to revise the Horticultural Food Systems concentration in the Bachelor of Science in Crop Sciences.

Sincerely,

astim Cantim

Kathryn A. Martensen Assistant Provost

Enclosures

c: D. Rosch S. Bartlett A. Davis S. Lovell M. Lowry R. Chappell EP.19.11

## UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

College of Agricultural, Consumer and Environmental Sciences

Academic Programs 128 Mumford Hall, MC-710 1301 West Gregory Drive Urbana, IL 61801

September 21, 2018

Kathy Martensen, Assistant Provost Office of the Provost 207 Swanlund Administration Building Campus MC-304

Dear Kathy:

I am writing to request campus-level approval for a proposal to revise the curriculum of the Horticultural Food Systems concentration within the undergraduate major in Crop Sciences. The enclosed proposal (in Senate format) has been reviewed and approved by the College of ACES Courses and Curricula Committee.

Thank you for your consideration. I look forward to receiving your reply.

Sincerely,

~ nU

David M. Rosch Interim Associate Dean ACES Academic Programs

DMR/rhc

cc: S. E. Bartlett A. Davis S. T. Lovell M. K. Lowry CPSC C&C Binder

# **ILLINOIS**

## **Proposal to the Senate Educational Policy Committee**

- **PROPOSAL TITLE:** Revise the Horticultural Food Systems Concentration within the Crop Sciences Major for the Bachelor of Science Degree, in the Department of Crop Sciences, College of ACES
- SPONSOR: Dr. Sarah Lovell, Associate Professor in Crop Sciences and Undergraduate Program Coordinator, Phone: 217-244-3433, Email: <u>stlovell@illinois.edu</u>
- **COLLEGE CONTACT**: Mary Lowry, Assistant Dean, Office of Academic Programs, College of ACES, Phone: 217-333-9391, Email: <a href="https://lowry@illinois.edu">lowry@illinois.edu</a>
- **BRIEF DESCRIPTION:** The Department of Crop Sciences proposes revisions to the curriculum of the Horticultural Food Systems concentration of the Crop Sciences Major. The changes include: adding a new required course; creating new categories of "Specialized Courses" and "Focus Area Electives" to better describe the options; moving several courses from the "Required" section to a "Specialized courses" section to allow greater flexibility in scheduling and in allowing students to specialize in certain areas; and removing courses that have been deactivated or considered less applicable. There are no changes to the major being proposed, and the number of hours required for graduation is also not changing.

Specifically, the purpose of each change is as follows (line numbers matching the table found in Appendix A):

- Line 10: Updated number of hours to reflect changes, and new totals are more consistent with other concentrations
- Line 12: A new course was developed to be required by all majors
- Lines 13, 15, 17, 21, 25, 27, 29: Moved to "specialized courses" section to allow more flexibility in scheduling and in specializing
- Line 28: Course is less applicable to our students than other soils classes
- Line 32: New section added to allow flexibility, including most courses removed from the concentration required section
- Lines 33, 34, 38, 3: Course added (moved from above section "Concentration Required"
- Lines 35, 36: Courses appropriate to specialization
- Line 41: Changed to specify "Focus Area Electives" as more specific grouping
- Line 42, 43: Moved from above section "Concentration Required"

- Lines 50, 54, 57: Optional courses also available in "Specialized Course" section, but must include note "May only be applied here if not used as 'Specialized Course" to avoid a single course to meet two different requirements.
- Line 51, 59, 61: Courses removed because they have been deactivated
- Line 62: Course added because it is appropriate to the concentration
- **JUSTIFICATION:** The revisions to this concentration will allow students greater flexibility in scheduling coursework and in specializing on certain topic areas. The previous version of the concentration was highly specific, with many specifically required courses. That situation caused course conflicts and sometimes resulted in a student being delayed a semester in completing the program.

### **BUDGETARY AND STAFF IMPLICATIONS:**

- 1) Resources
  - a. How does the unit intend to financially support this proposal?

This proposal requires no additional resources, because it is primarily a regrouping of courses already required in the concentration, and includes only existing courses.

b. How will the unit create capacity or surplus to appropriately resource this program? If applicable, what functions or programs will the unit no longer support to create capacity?

For this proposal, no additional capacity or surplus is expected.

c. Will the unit need to seek campus or other external resources? If so, please provide a summary of the sources and an indication of the approved support.

The unit will not need campus or external resources for these revisions.

d. Please provide a letter of acknowledgment from the college that outlines the financial arrangements for the proposed program.

A letter is attached as Appendix B.

- 2) Resource Implications
  - a. Please address the impact on faculty resources including the changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

These revisions are not expected to impact faculty resources, because they draw from the same courses for students that we currently have.

b. Please address the impact on course enrollment in other units and provide an explanation of discussions with representatives of those units.

Enrollment in certain courses (those previously "Specifically required") may drop by 2-4 students, but those are primarily within our own unit and would likely be redistributed within the unit. A letter from the ABE department allowing the addition of TSM 311 and a letter from IB allowing the addition of IB 420 are attached as Appendix C. All other courses in the concentration are within the Department of Crop Sciences.

c. Please address the impact on the University Library

We expect the impact on the University Library to remain at the same level, and a letter of support from them is included as Appendix D.

d. Please address the impact on technology and space (e.g. computer use, laboratory use, equipment, etc.)

We do not expect an impact on technology and space, since the number of students in each of the course would remain within the typical range.

### **DESIRED EFFECTIVE DATE:**

Spring 2019

**STATEMENT FOR PROGRAMS OF STUDY CATALOG:** Because the nature of the concentration is not changing, there will not be any change to the catalog text.

CLEARANCES: (Clearances should include signatures and dates of approval. These signatures must appear on a separate sheet. If multiple departments or colleges are sponsoring the proposal, please add the appropriate signature lines below.)

Signatures Unit Representative

College Representative:

9/20/18 9/20/12

Date:

Date:

Graduate College Representative:

Date:

Council on Teacher Education Representative:

Date:

.

Appendix A: Comparison of Current and Proposed Horticultural Food Systems Concentration

	Current Requirements:	Current	Revised Requirements:	Revised
		Hours		Hours
1	Natural Science and Technology Required	15-16	Natural Science and Technology Required	15-16
2	CHEM 102: General Chemistry I		CHEM 102: General Chemistry I	
3	& CHEM 103: and General Chemistry Lab I		& CHEM 103: and General Chemistry Lab I	
4	CHEM 104: General Chemistry II		CHEM 104: General Chemistry II	
5	& CHEM 105: and General Chemistry Lab II		& CHEM 105: and General Chemistry Lab II	
6	CHEM 232: Elementary Organic Chemistry I		CHEM 232: Elementary Organic Chemistry I	
7	or CPSC 382: Organic Chem of Biol Processes		or CPSC 382: Organic Chem of Biol Processes	
8	IB 103: Introduction to Plant Biology		IB 103: Introduction to Plant Biology	
9				
10	Horticultural Food Systems Concentration Required	63	Horticultural Food Systems Concentration Required	50-51
11			Horticultural Food Systems Concentration Required Core:	28
12			(Add) CPSC 102: Research in Crop Sciences (1 hr.)	
13	ACE 231: Food and Agribusiness Mgt			
14	CPSC 226: Introduction to Weed Science		CPSC 226: Introduction to Weed Science (3 hrs.)	
15	CPSC 261: Biotechnology in Agriculture			
16	CPSC 270: Applied Entomology		CPSC 270: Applied Entomology (3 hrs.)	
17	CPSC 352: Plant Genetics			
18	CPSC 498: Crop Sci Professional Develpmt		CPSC 498: Crop Sci Professional Develpmt (1 hr.)	
19	HORT 100: Introduction to Horticulture		HORT 100: Introduction to Horticulture (3 hrs.)	
20	HORT 240: Plant Propagation		HORT 240: Plant Propagation (3 hrs.)	
21	HORT 341: Greenhouse Mgmt and Production			
22	HORT 360: Vegetable Crop Production		HORT 360: Vegetable Crop Production (3 hrs.)	-
23	HORT 361: Small Fruit Production		HORT 361: Small Fruit Production (2 hrs.)	
24	HORT 362: Tree Fruit Production		HORT 362: Tree Fruit Production (2 hrs.)	
25	HORT 421: Horticultural Physiology			
26	NRES 201: Introductory Soils		NRES 201: Introductory Soils (3 hrs.)	
27	NRES 438: Soil Nutrient Cycling			
28	or NRES 474: Soil and Water Conservation			
29	or NRES 488: Soil Fertility and Fertilizers			
30	PLPA 204: Introductory Plant Pathology		PLPA 204: Introductory Plant Pathology (3 hrs.)	
31				

32	(Add) Select 7 or 8 hours from the following specialized courses:	7-8
33	(Add) CPSC 352: Plant Genetics (4 hrs.)	
34	(Add) HORT 341: Greenhouse Mgmt and Production (4 hrs.)	~
35	(Add) HORT 442: Plant Nutrition (4 hrs.)	
36	(Add) IB 420 or CPSC 484: Plant Physiology	
37	or HORT 421 Horticultural Physiology (3 or 4 hrs.)	
38	(Add) NRES 438: Soil Nutrient Cycling (3 hrs.)	
39	(Add) or NRES 488: Soil Fertility and Fertilizers (3 hrs.)	
40		
41 Select 15 hours from the following:	(Add) Select 15 hours from the following focus area electives:	15
42	(Add) ACE 231: Food and Agribusiness Mgt (3 hrs.)	
43	(Add) CPSC 261: Biotechnology in Agriculture (3 hrs.)	
44 CPSC 431: Plants and Global Change	CPSC 431: Plants and Global Change (4 hrs.)	
45 CPSC 437: Principles of Agroecology	CPSC 437: Principles of Agroecology (3 hrs.)	
46 HORT 180: Medicinal Plants and Herbology	HORT 180: Medicinal Plants and Herbology (3 hrs.)	-
47 HORT 205: Local Food Networks	HORT 205: Local Food Networks (3 hrs.)	
48 HORT 298: Undergraduate Seminar	HORT 298: Undergraduate Seminar (1 to 3 hrs.)	
49 HORT 301: Woody Landscape Plants I	HORT 301: Woody Landscape Plants I (4 hrs.)	
50	(Add) HORT 341: Greenhouse Mgmt and Production* (4 hrs.)	
51 HORT 343: Deactivated Course		
52 HORT 344: Planting for Biodiversity and Aesthetics	HORT 344: Planting for Biodiversity and Aesthetics (3 hrs.)	
53 HORT 363: Postharvest Handling Hort Crop	HORT 363: Postharvest Handling Hort Crop (2 hrs.)	
54	(Add) HORT 421: Horticultural Physiology* (4 hrs.)	
55 HORT 434: Designing Urban Agriculture	HORT 434: Designing Urban Agriculture (2 hrs.)	
56 HORT 435: Urban Food Production	HORT 435: Urban Food Production (3 hrs.)	
57 HORT 442: Plant Nutrition	HORT 442: Plant Nutrition * (4 hrs.)	
58 HORT 447: Horticultural Plant Breeding	HORT 447: Horticultural Plant Breeding (3 hrs.)	
59 HORT 464: Deactivated Course		
60 HORT 475: Permaculture & Agroforestry	HORT 475: Permaculture & Agroforestry (3 hrs.)	
61 HORT 482: Deactivated Course		
	(Add) TSM 311: Humanity in the Food Web (3 hrs.)	
Total ACES prescribed and elective hours must total 3	5 Total ACES prescribed and elective hours must total 35 hours, of which	
hours, of which 20 must be completed in residence.	20 must be completed in residence.	

\* May only be applied here if not used as a Specialized Course.

Appendix B:

# **I** ILLINOIS

### COLLEGE OF AGRICULTURAL, CONSUMER AND ENVIRONMENTAL SCIENCES

Academic Programs 128 Mumford Hall, MC-710 1301 W. Gregory Drive Urbana, IL 61801

August 6, 2018

To Whom It May Concern:

I am writing in support of the proposal to make revisions to the concentration in Horticultural Food Systems offered under the major in Crop Sciences, in the Department of Crop Sciences, proposed by Dr. Sarah Lovell. The program has not requested funding from the college to support these revisions, and none has been made available. The courses already exist and we don't expect to need to increase capacity due to the proposed changes. If you have any questions, please contact me.

Sincerely,

Realit om

Prasanta Kalita Professor and Associate Dean

> UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN 217.333.3380 • academics.aces.illinois.edu

# **I**ILLINOIS

### COLLEGE OF AGRICULTURAL, CONSUMER AND ENVIRONMENTAL SCIENCES

Department of Agricultural & Biological Engineering 338 Agriculture Engineering Sciences Building, MC-644 1304 W. Pennsylvania Ave. Urbana, IL 61801

August 14, 2018

Dr. Sarah Lovell Associate Professor of Landscape Agroecology Undergraduate Program Coordinator Department of Crop Sciences University of Illinois stlovell@illinois.edu

Dear Sarah,

I approve your request to include TSM 311 Humanity in the Food Web, in your proposal to the Senate Educational Policy Committee for the revision of the Horticultural Food Systems Concentration within the Crop Sciences Major as an additional, optional course.

As a consequence, it is estimated that enrollment in the course would increase by 2-4 students each term it is offered. These numbers, and more, can readily be accommodated.

I wish you success with your proposal!

Sincerely,

Alen Horesen

Alan C. Hansen Professor and Interim Head Department of Agricultural and Biological Engineering achansen@illinois.edu

#### UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

School of Integrative Biology 286 Morrill Hall 505 South Goodwin Avenue Urbana, IL 61801



August 10, 2018

Dr. Sarah Lovell Associate Professor of Landscape Agroecology Undergraduate Program Coordinator Department of Crop Sciences University of Illinois stlovell@illinois.edu

Dear Sarah,

I approve your request to include IB 420 (CPSC 484), Plant Physiology, in your proposal to the Senate Educational Policy Committee for the revision of the Horticultural Food Systems Concentration within the Crop Sciences Major as an additional, optional course.

As a consequence, it is estimated that enrollment in the course would increase by 2-4 students each term it is offered. These numbers, and more, can readily be accommodated.

I wish you success with your proposal!

Sincerely yours,

G. Dosinie

Stephen R. Downie Associate Director of Academic Affairs School of Integrative Biology sdownie@illinois.edu

## UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

University Library Office of University Librarian and Dean of Libraries 230 Main Library, MC-522 1408 West Gregory Drive Urbana, IL 61801



August 21, 2018

Dr. Sarah Lovell Associate Professor and Undergraduate Program Coordinator Crop Sciences 1009 Plant Science Lab M/C 634

Dear Prof. Lovell:

The University Library recently received a proposal from you outlining the Crop Sciences department's plans to revise the Horticultural Food Systems Concentration within the Crop Sciences Major for the Bachelor of Science Degree, in the Department of Crop Sciences, College of ACES.

Based upon the documents received and reviewed by Sarah Williams in the Funk ACES Library, it is our belief that there will be no impact on the University Library. We are already supporting this program and see no meaningful changes in our operations as a result of this move.

If additional services or materials are required as the programs further develop, we will be happy to discuss those needs as they emerge.

Sincerely,

John Wilkin Juanita J. and Robert E. Simpson Dean of Libraries and University Librarian

e-c: Mary Lowry, Assistant Dean for Student Success, College of ACES Thomas Teper Sarah Williams

:

## UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN SENATE URBANA SENATE OBSERVER (Final; Information)

# SC.20.08 Report on the November 14, 2019 meeting of the Board of Trustees of the University of Illinois System in Chicago

## Overview

Chairman Donald Edwards started the meeting with a moment of silence for veterans, in honor of Veteran's Day.

UIC Chancellor Michael Amiridis provided an update of news and events from his campus. He emphasized their growing rankings and their significant impact on the city of Chicago.

President Tim Killeen offered a presentation, "Empowering Extraordinary." Total system enrollment is over 89,000, on its way to 93,000 by 2021. He highlighted the system strategic plan, and progress toward fulfilling it. "This is the most dynamic university system anywhere to be found."

Vice President/CFO Avijit Ghosh presented the financial report for FY 19 to the Board. The total budget, with payments on behalf, is over \$6 billion. This represents a \$378 million increase, bringing the budget back closer to its condition before the state budget crisis in 2016.

Executive Vice President Barbara Wilson summarized the 2021 budget request. The five year tuition freeze has been accompanied by student growth and growth in financial aid (123% over ten years). Institutional support is greater than state and federal aid. 60% of undergrads at Urbana pay less than full tuition and fees. Now we need to grow the faculty to meet student demand. We are below the faculty numbers from 2009.

The 2021 budget request is \$697.4 million, an increase of \$75.3 million (+12%). This includes a request for \$10 million for new faculty hires, plus about \$50 million for a 2% salary program and 2.25% CMER. There is a separate capital request of \$725.5 million. This includes money for two major Urbana projects: a new DRES building and Information Sciences.

## **Public Comments**

An NPR reporter from UIS asked the Board to change the policy requiring reporters who work for the university to act as mandatory reporters when presented with information on Title IX violations. The head of the Better Government Association also spoke to the same issue. The Director of the ACLU Illinois spoke to the same issue.

### Board Resolution on Sexual Misconduct (not available beforehand)

In short, the Board endorsed the recommendations of the system Task Force report, and directs that the recommendations should be adopted "as expeditiously as possible," consistent with processes of shared governance and collective bargaining.

### **Personnel Decisions Affecting Urbana**

Appoint Vice Chancellor for Research and Innovation, Susan Martinis, Urbana

Multiyear Contract with Director, Division of Intercollegiate Athletics, Josh Whitman, Urbana

### **Curricular Decisions Affecting Urbana**

Establish the Bachelor of Science in Metropolitan Food and Environmental Systems, College of Agricultural, Consumer and Environmental Sciences, Urbana

Rename the Doctor of Philosophy in Library and Information Science, School of Information Sciences and the Graduate College, Urbana

Eliminate the Bachelor of Fine Arts in New Media, College of Pine and Applied Arts, Urbana

Eliminate the Bachelor of Fine Arts in Sculpture, College of Pine and Applied Arts, Urbana

Eliminate the Bachelor of Fine Arts in Painting, College of Fine and Applied Arts, Urbana

### **Construction and Renovation Decisions Affecting Urbana**

Approve Project Budget for Renovation, Altgeld Hall and Replacement, Illini Hall, Urbana

Approve Project Budget and Amend Professional Services Consultant Contract for Parking, Central Campus Parking Structure(s), Urbana

Approve Project Budget for Energy Conservation Project, Laboratory Facilities, Urbana

Approve Project Budget and Amend Professional Services Consultant Contract for Illinois Field, Baseball Training Center, Division of Intercollegiate Athletics, Urbana

Submitted, Nicholas C. Burbules