

***Integrative
Physiology***



University of Colorado Boulder

Current Educational Efforts and Challenges

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Integrative Physiology
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Facts about IPHY

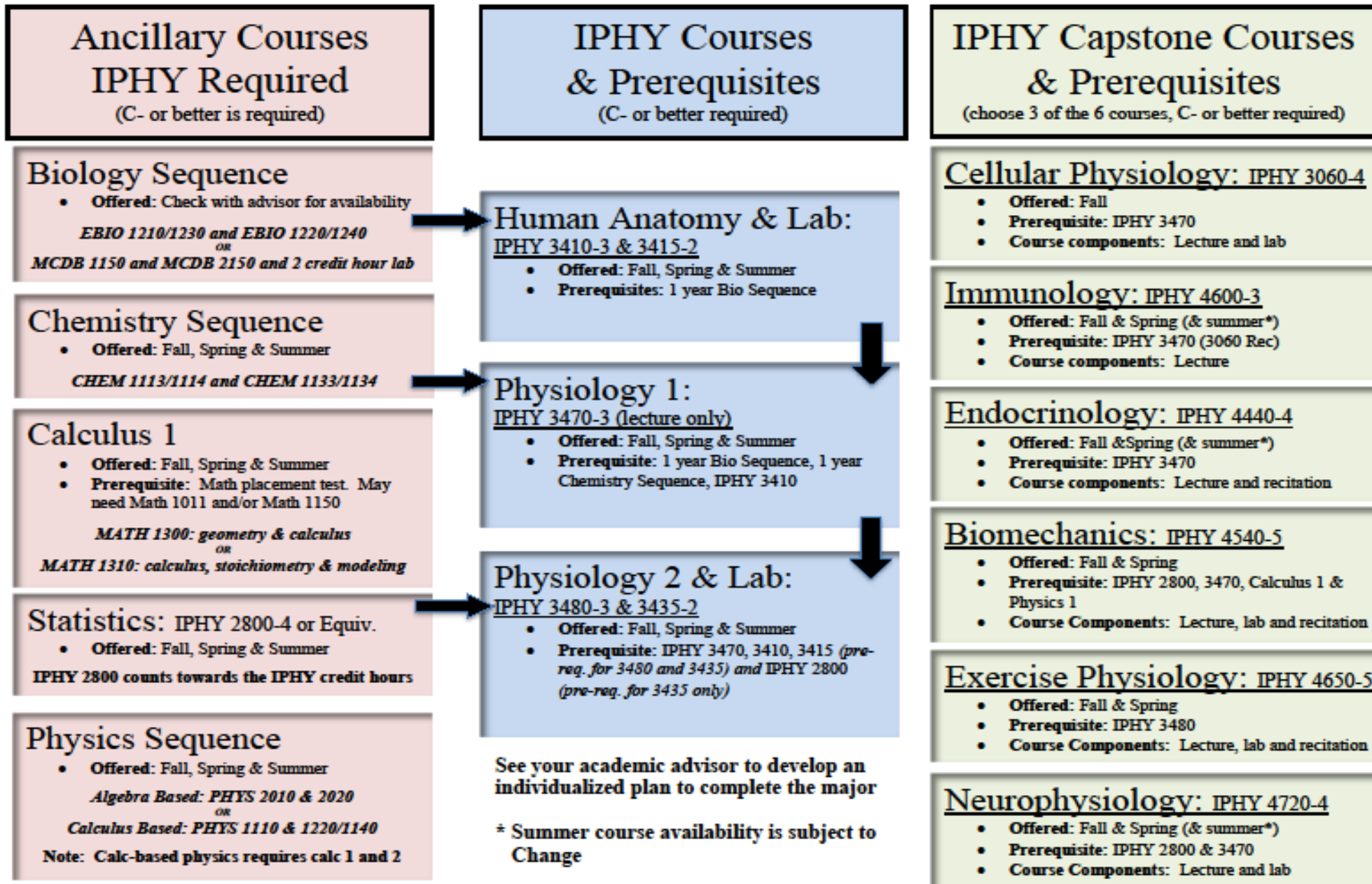
- Tenured and Tenure-Track Faculty: 22
- Instructors: 9 + 1
- Graduate Students: 57-75 (Fa18: 25 PhD, 26 MS, and 6 BA/MS)
- Undergraduate Students: ~1800
- Current service and major courses →

Service Courses

- Nutrition (IPHY 2400): ~400/semester
- Anatomy lecture (IPH 3410): 450/310 and lab (IPHY 3415)
- Physiology for Non-major (IPHY 3430): main campus:70-86/semester; Online: 21/semester
- Introduction to Epidemiology (IPHY 3490): 100-130/semester
- Statistics (IPHY 2800): applied to fulfill QRMS requirement

Current IPHY Curriculum

INTEGRATIVE PHYSIOLOGY FLOW CHART



Additional IPHY Coursework May Be Needed to Reach 30 Hours of IPHY (18 Upper Division) to Complete the IPHY Major

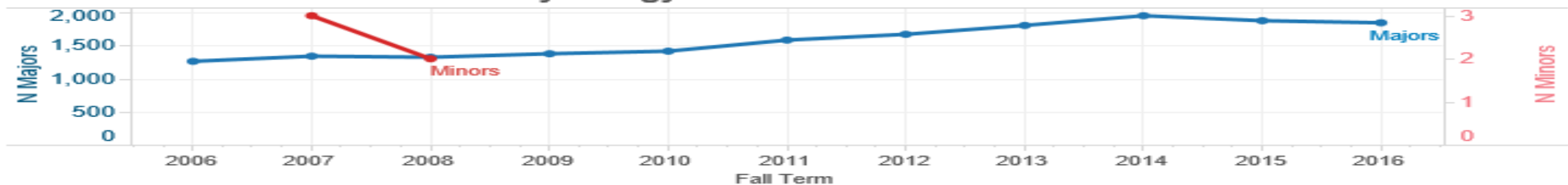
Other Upper Division Credits

- Internships (6 Cr): Sp 46/Fa 39
- Independent Studies (6 Cr): Sp 34/Fa 15
- UGTA Program (6 Cr): Sp 118/Fa 98
- UGTA Training Class (1 Cr): since Fa 2017

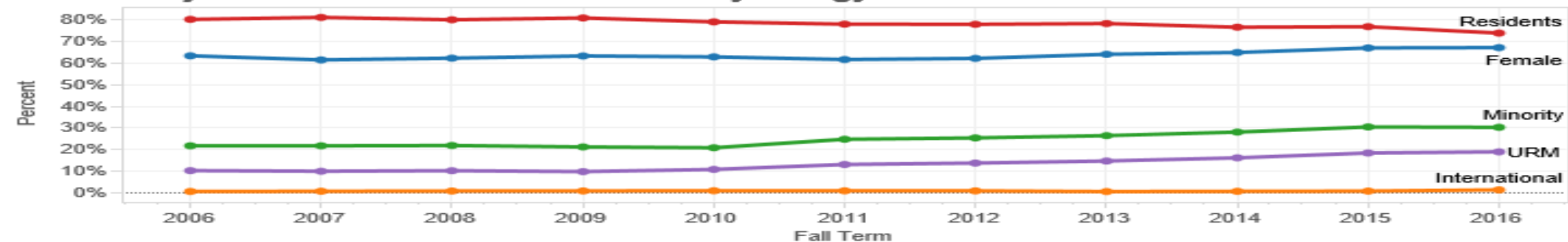
What's Difficult?

- Anatomy Lab:
 - Popular
 - DFW rates: 25-30%
 - Change to elective?

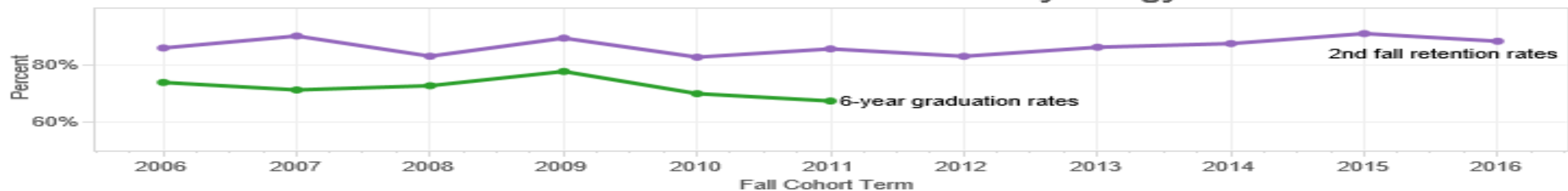
Fall UG Enrollment - IPHY-Int Physiology



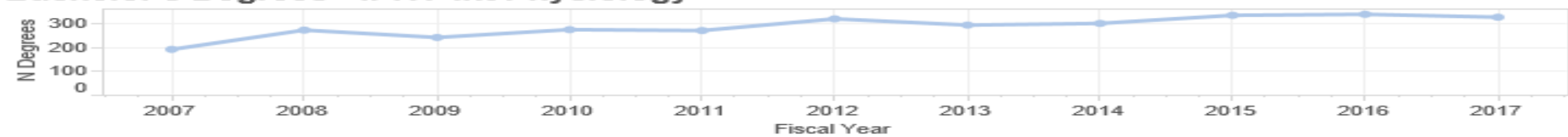
Fall UG Majors Characteristics - IPHY-Int Physiology



UG 2nd Fall Retention & 6-Year Graduation Rates - IPHY-Int Physiology



Bachelor's Degrees - IPHY-Int Physiology



Retention Rates

- 49% (1st declared IPHY as their major) graduated with IPHY
- 25% left IPHY but graduated from CU
- 26% left CU

What's Working Well?

All Instructors involved in pedagogy

- 3 department education specialists
- Developed lots of active learning materials
- Continue training and attending workshops
- Teach all core courses except two
- Mentor new faculty



Example of a case study in an immunology class



Example of UGTA assistance in the physiology Lab

What's Working Well? - Continued

- 5 Tenure-track faculty were involved in developing learning goals for the labs.
- 2 New faculty are on board with active learning.
- Some faculty created two-tier exam questions on their own.
- 1 faculty created first CURE

Active Learning in IPHY Courses

	LGs	Homework	Clickers	Worksheet	Case Studies	Two-tier Exam Questions	Pre/post Assessment
IPHY2420		Y		Y	Y		
IPHY2800	y	Y	Y				
IPHY3010	Y	Y	Y	Y	Y/N	Y/N	
IPHY3415	y	Y		Y		y	Y
IPHY3470	y	Y/N	Y/N	Y	Y/N		Y/N
IPHY3480	y	Y/N	Y	Y	Y/N		Y/N
IPHY3435	y			Y	Y	Y	Y
IPHY3700	y	Y					Y
IPHY3060	Y	Y					
IPHY4440	y	Y	Y		Y		Y
IPHY4540	y	Y	Y				
IPHY4600	y	Y	Y		Y		Y
IPHY4650	y		Y				
IPHY4720	Y	Y	Y	Y/N	Y/N		Y/N
IPHY3490	Y	Y	Y	Y	Y	Y	Y

What Did Our Students Say?

Q:What is the ONE BEST THING about IPHY?

Answered:



Certificate and Club

- Public Health Certificate: IPHY faculty developed and teach the epidemiology course
- IPHY Club: peer tutoring

Challenges

- 4+4 teaching load for instructors
- Too few opportunities for research and internships
- Insufficient interactive classrooms
- Lack of space for office hours and exam accommodations (1→15%)
- 5 faculty retired in recent years
- Minimal faculty interactions due to spread of physical locations

Future Changes/Actions

- Simplify our major
 - Reduce the number of required IPHY credits
 - More flexibility
 - Opportunities for personalization of program
- Installing an Internship Coordinator:
 - Oversee all internships
 - Reach out to the community for potential positions
- Recruit more faculty
- Increase faculty interactions
 - Improve the sense of community
- Ramaley addition (by 2020)

Acknowledgements:

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Questions?