Graduate Executive Committee
February 14, 2020
Minutes

Attendees:
   Voting Members: Jeff Spicher, Margaret Harris, Jon Caudill, David Moon, Brandon Vogt, Sarbarish Chakravarty, Karen Livesey, Janel Owens, Jeremy Bono, Brian Duvick, Leilani Feliciano, Jeff Monez de Oca, David Fenell, Linda Button, Sylvia Mendez
   Non-Voting Members: Beth Daniels, Mary Rupp, Wendy Clouse, Jessi Smith, Tom Christensen, Jose Mora, Kelli Klebe, Sarah Elsey, Kylie Rossman

- Math PhD program changes from 75 to 60 credits (Dr. Chakravarty; see below)
    o The GEC voted to recommend approval of the proposed credit requirement change for the Ph.D. Mathematics program (14 Yes, 0 No, 0 Abstain)

- Discussion of CU System Strategic Plan—Research and Graduate Education "Pillar" " (Provost Christensen; AVC for Research Smith)
    o Two allowed goals—currently the proposed goals are amount of sponsored funding; number of PhD graduates; both of which related to the Carnegie classification criteria
    o If programs were asked to set goals what does that mean; what are barriers for goal setting and meeting; what does it mean for our master programs
    o See data on program enrollments and graduations

Dean's report
- GRE and International Students: Applicants from China may not be able to take GREs due to closure of testing centers because of the virus outbreak. Please consider how you may want to handle this in upcoming admissions decisions.
- Mountain Lion Grad Slam
    o Live streamed by Jared Verner (University Communications and Media Relations); good audience attendance
    o 6 students across 4 LAS programs competed in the finals; very close competition; first time no one in preliminary trials or finals were not disqualified
    o **Brianne McGrath** of physics received 1st place award presenting "The Strange Magnet: Iron Rhodium" (Advisors: Karen Livesey and Robert Camley). Brianne will be representing UCCS at the Colorado Council of Graduate Schools (Denver, March 6) and at the Western Association of Graduate Schools (Albuquerque, March 11).
    o **Brittini A. Hill** of biology received both 2nd place and People's Choice Award presenting "Immigrant Dolphins." (Advisor Jeremy Bono).
- Spring Enrollments: Applications down 19%; Admits down 18%; Enrollments down 23% (represents 68 fewer students); 231 new enrolled students.

Informational items:
- Math MS program modification. Remove required subfield in computational competency (see current curriculum below).
    o The proposed change is to remove the 6th bulleted item from top.
      Rationale: While the computational requirement is useful for the Applied, Education and Business track, the department feels it is an undue burden on students planning to pursue a PhD in pure mathematics where computational training is optional.

- Recommended Changes to DNP Curriculum
  - Change name of NURS 7100 from Org. Systems Leadership & Quality Improvement to NURS 7100 Organizational Systems Leadership.
  - Move NURS 7110 Inferential Stats to spring semester (year 1 or year 2 depending on Curricular Plan) – decrease credits from 3 to 2 and change name from Inferential Stats to Evaluation of Clinical Research and QI Projects. (Students take 2 other Research Courses NURS 6120 (3 credits) Research and Knowledge Translation in Nursing and NURS 7080 (3 credits) Clinical Nursing Scholarship for Evidence Based Practice)
  - Start Cohort model for DNP Project – starting with DNP Project I – DNP Project V. Expectation is for student to defend DNP Project Proposal at the end of Year 2 for Full-time Plan and Project at the end of Year 3. Total of 11 credits for DNP Project – increase from 10 with 1 credit coming from NURS 7110 Evaluation of Clinical Research and QI Projects
  - Adjusted Synthesis Practicum credits so that students are doing at least 45 clinical hours each semester in the last 2 years in the BSN-DNP Part-time plan

Announcements
- Spring 2020 GEC Meetings (10:00-11:30; location Dwire 204)
  - Mar 13, April 10, May 8 (UC Brooks 126, May only)
- Graduate Student Appreciation Week (April 6 -10, 2020): The Graduate School office will be hosting a celebration at Clyde's on April 10, more details to come. We encourage programs to think of ways they can recognize their students during this week as well.
- Graduate Research Showcase, May 1, 4:00 – 6:00pm. More details to come about registration. Invite students to participate. Consider having your capstone courses present at this event.

Money, Money, Money
- Travel Awards are now open and we are accepting online applications until March 2nd. Email selsey@uccs.edu with questions.
- Mentored Doctoral Fellowship and the Graduate Opportunity Scholarship close March 1. Students apply directly through the UCCS Scholarship Portal.
- The First Annual Cesar E. Chavez Graduate Scholarship closes Feb 18th at noon. Students apply directly. Application information can be found on the Equity, Diversity and Inclusion website: https://www.uccs.edu/diversity/cesar-e-chavez-graduate-0
- Graduate Research Fellowship nominations are due Feb 24. Nomination must come from the program.
- You all have been given information about the Graduate Tuition Matching Grants and Out-of-state recruitment grants. These are yours to distribute to recruit students. Awardee information is due to Graduate School in May.

Information about scholarships, travels awards, etc. for graduate students can always be found at https://www.uccs.edu/graduateschool/uccs-finances/finance-resources

Current Curriculum for MS Mathematics:

- o   A 3.0 grade point average in coursework applied towards the degree.
- o   All degree courses must be part of an approved plan of study, developed by the student and approved by the advisor (Graduate Chair) within the first semester after being admitted to the program. This plan may be revised at any time with the approval of the advisor. The plan will require students to demonstrate some cohesiveness in the courses chosen, or to demonstrate a clear subject area of concentration.

- Courses will have graduate rank only if members of the graduate school faculty teach them and are at the 5000 level or above.

- o   Modern Analysis I (MATH 4310) plus at least 27 semester hours of approved graduate work, including Linear Algebra (MATH 5130) and Modern Analysis II (MATH 5320). All students must pass the comprehensive examination in Modern Analysis. All students must complete Linear Algebra (MATH 5130) and the Analysis sequence (MATH 4310 and MATH 5320) in their first year of admission, and attempt the Comprehensive exam in Analysis offered in the Summer.
  Note: The MATH 4310 requirement may be waived on a case-by-case basis only for UCCS students who completed MATH 4310 with a grade of B or higher within one year before admission to the program, and for students in the Accelerated Master's Program. If a waiver is approved by the Graduate Chair, then MATH 4310 shall be replaced by 3 semester hours of approved graduate work.
- o   Students completing one of the four tracks of study will automatically fulfill the requirements for the M.S. in Applied Mathematics degree.
- o   All students must successfully complete one of the following: MATH 5480, MATH 5650, MATH 5670, or MATH 3670/5900 to fulfill the computational competency requirement. Please note that knowledge of a computer language such as MATLAB is necessary to complete this requirement. This requirement may be waived at the discretion of the Graduate Chair upon providing evidence of previous computing experience.
- o   A student may complete up to 9 hours of appropriate graduate course work in departments other than the Department of Mathematics, as part of the "tracks" program. Such courses MUST be pre-approved by the advisor.
- o   Students may select a thesis or non thesis option. Students in the thesis option will replace 6 hours of graduate level courses with a Master's thesis.
- o   All students make an oral presentation regarding some aspect of advanced mathematics. For students pursuing the thesis option, the thesis defense will qualify as such a presentation.

The department Graduate Committee must approve exceptions to these requirements.

In addition, students can tailor their own curriculum within the M.S. program, by choosing one of the following four tracks: Ph.D. Preparation, Applied, Education, or Business. However, it is not mandatory to adhere to any particular track. For more information on the tracks, please see https://www.uccs.edu/math/current-students/graduate/ms_applied_mathematics.

Proposal to reduce the required Mathematics PhD credit hours from 75 to 60

The graduate faculty of the Mathematics department voted unanimously in Dec 2019 to forward the proposal to the Graduate School.

Background
When the Applied Sciences PhD program started in 2009, a total of 75 credit hours was required. This was required of all PhD programs by the UCCS Graduate School at the time.

Currently Math requires a minimum of
<div align="center">

24 hours of coursework
30 hours of dissertation
</div>
and then allows students to add 21 hours of either coursework (including course transfer, independent study) or dissertation hours to make the 75 hours in total that the PhD program requires.

In April 2014, the Graduate School voted overwhelmingly that PhD programs could choose to reduce the hours they require. Currently, the Physics and Engineering PhD programs require less than 75 credit hours while the Graduate School policy requires a minimum of 60 credit hours. The Mathematics department would like to reduce the total number of required hours from 75 to 60. for the reasons stated below.

<div align="center">

Current Mathematics PhD curriculum
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Courses

Math 5130 – 3 CH
Math 5320 – 3 CH
PhD core – 18 CH

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    Total – 24 CH

Thesis – 30 CH

Note: The PhD core consists of 3 course sequences that the students choose from the 6 core areas: Complex Analysis, Functional & Real Analysis, Applied Mathematics, Probability, Ring Theory and Scientific Computation. Each sequence has 2 (6 CH) courses at the 5/6000-level.

In addition, students must take **21 hours** of elective courses at the 5/6000-level to fulfill the 75 hour PhD requirement. These 21 hours can be a combination of coursework, transfer credits, or independent study.

Exams

1. Preliminary exams in Linear Algebra and Analysis after first year of coursework.
2. Comprehensive exams in 2 out of the 3 PhD core areas chosen by the student.
3. Dissertation proposal defense
4. PhD dissertation defense

Proposed Mathematics PhD curriculum

Courses

Math 5130 – 3 CH
Math 5320 – 3 CH
PhD core – 18 CH
Elective   – 6 CH

     Total – 30 CH

Note: The 6 hours elective courses must be at 5/6000-level and can be a combination of coursework, transfer credits, or independent study.

Thesis – 30 CH

Exams

1. Preliminary exams in Linear Algebra and Analysis after first year of coursework.
2. Comprehensive exams in 2 out of the 3 PhD core areas chosen by the student.
3. Dissertation proposal defense
4. PhD dissertation defense

Summary: We propose to increase the minimum coursework requirement from 24 CH to 30 CH but propose to lower the total hours from 75 CH to 60 CH.

This will:
1. Bring Mathematics closer in line with other PhD programs, on the average. (See survey below)
2. Not affect the quality of the PhD degree.
3. Still meet the 60 hour minimum that UCCS now requires.
4. Save students substantial amounts of money.

Survey

A survey of Mathematics PhD programs of some neighboring institutions and some peer institutions shows that the average number of **required credit hours is 59**. For each institution below the numbers below indicate coursework, thesis credit and total CH, respectively.

CU Boulder (Applied Math) – $30 + 30 = 60$ CU Denver – $42 + 30 = 72$
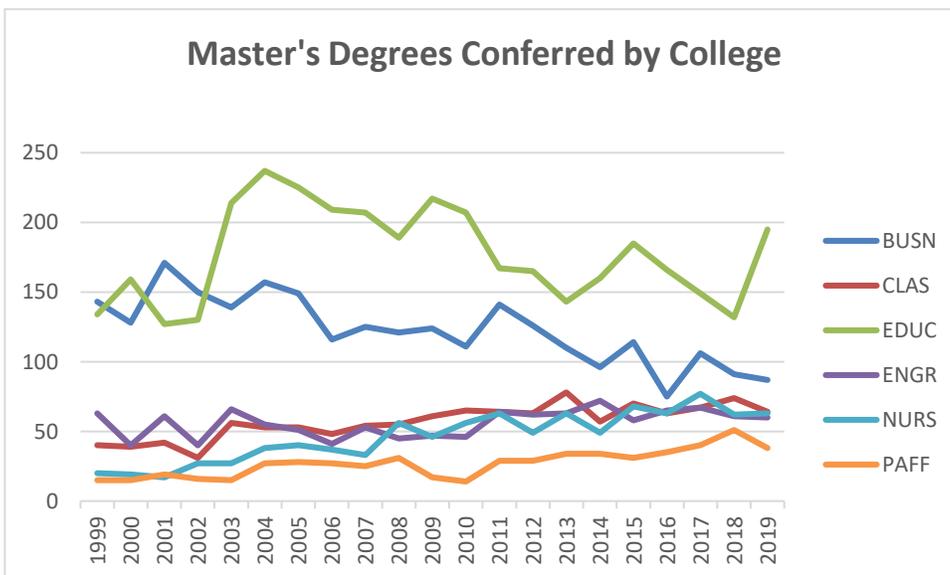Central Michigan U – $57 + 12 = 69$ Delaware State U – $30 + 18 = 48$
New Mexico State – $30 + 18 = 48$ Colorado State U – $48 + 24 = 72$
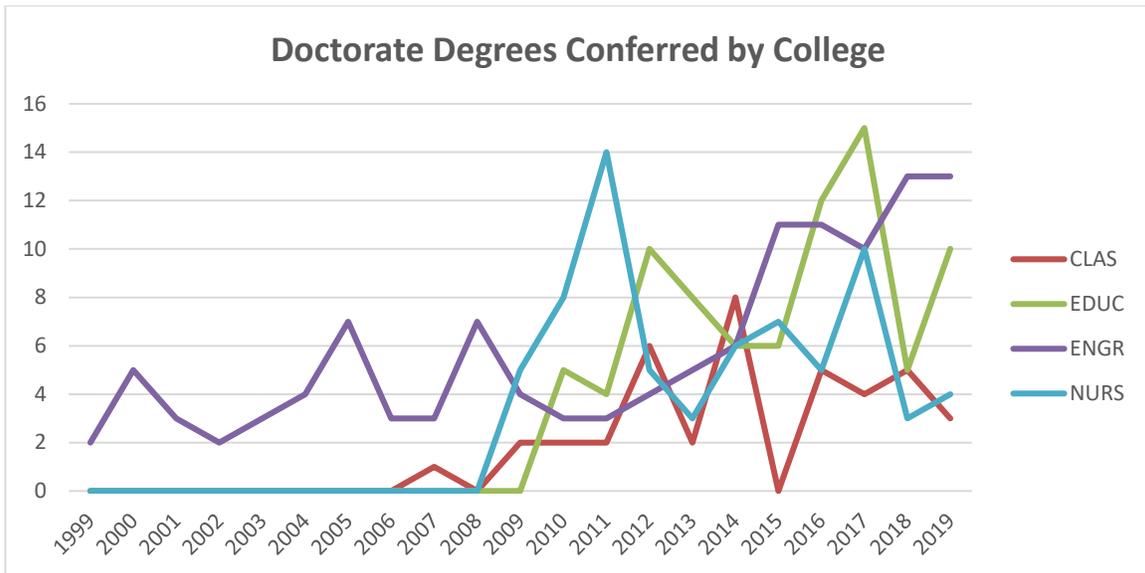U Maryland Baltimore County – $24 + 18 = 42$ U Rutgers Newark – $48 + 24 = 72$
Southern Methodist U – $51 + 6 = 57$ Texas Christian U – $27 + 12 = 39$
School of Mines – $48 + 24 = 72$

If approved, the department plans to implement this policy effective Fall 2020. The policy will apply to students admitted to the PhD program starting from Fall 2020 as well as to current PhD students in the program who will graduate on or after Fall 2020. However, the existing requirement of 75 credit hours will apply to students graduating in Spring 2020.
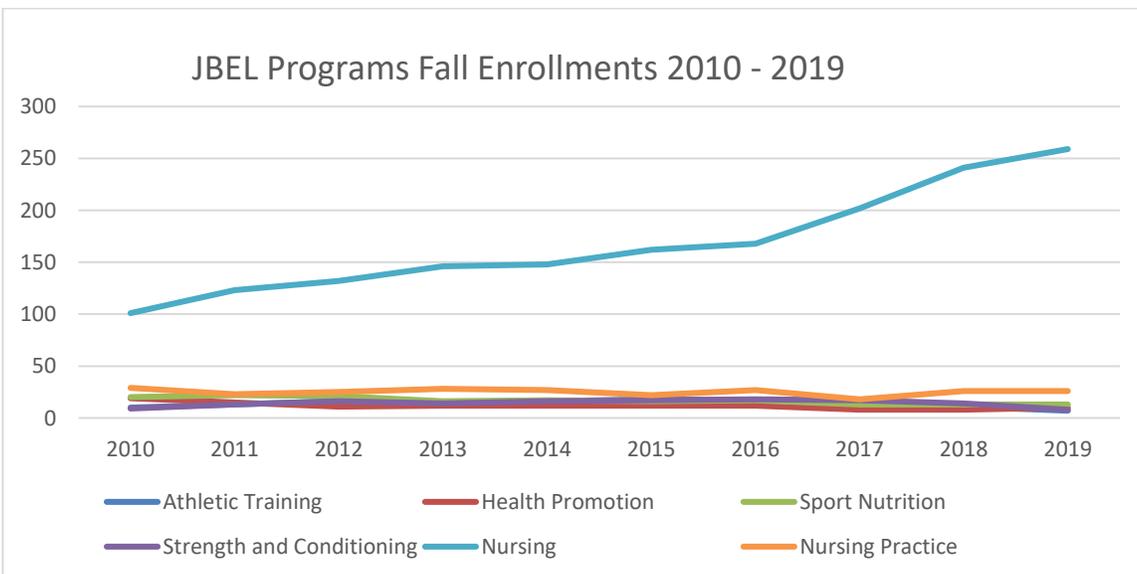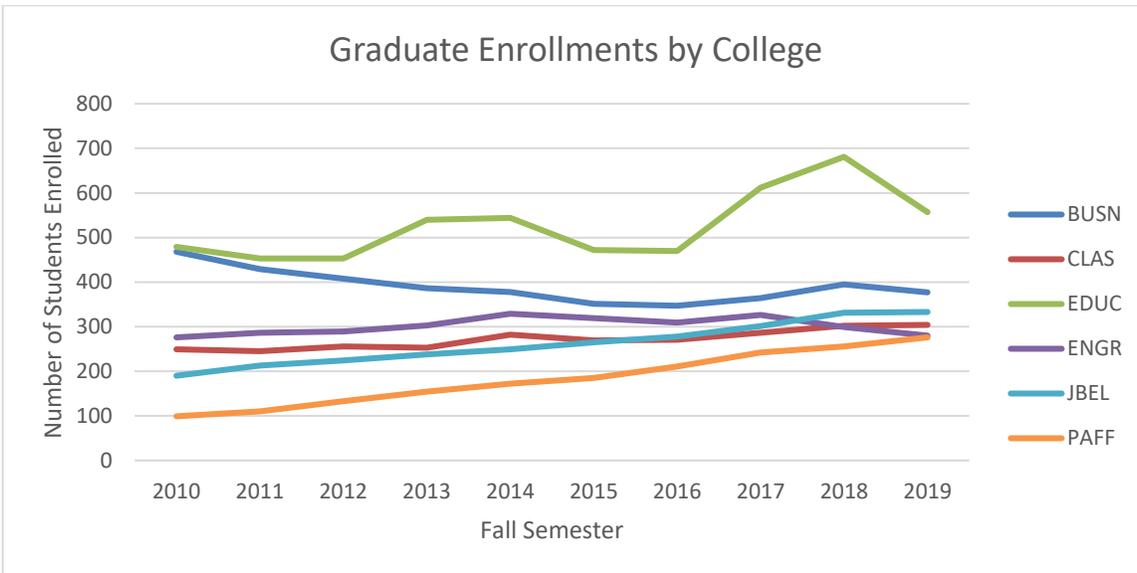
UCCS Degrees Conferred Academic Years 1999 - 2019

Total Degrees Conferred

Legend:
- Bachelors
- Certificates
- Master's
- Doctorate

Bachelor's Degrees Conferred by College

Legend:
- BUSN
- CLAS
- EDUC
- ENGR
- NURS
- PAFF

Master's Degrees Conferred by College

Legend:
- BUSN
- CLAS
- EDUC
- ENGR
- NURS
- PAFF

Doctorate Degrees Conferred by College
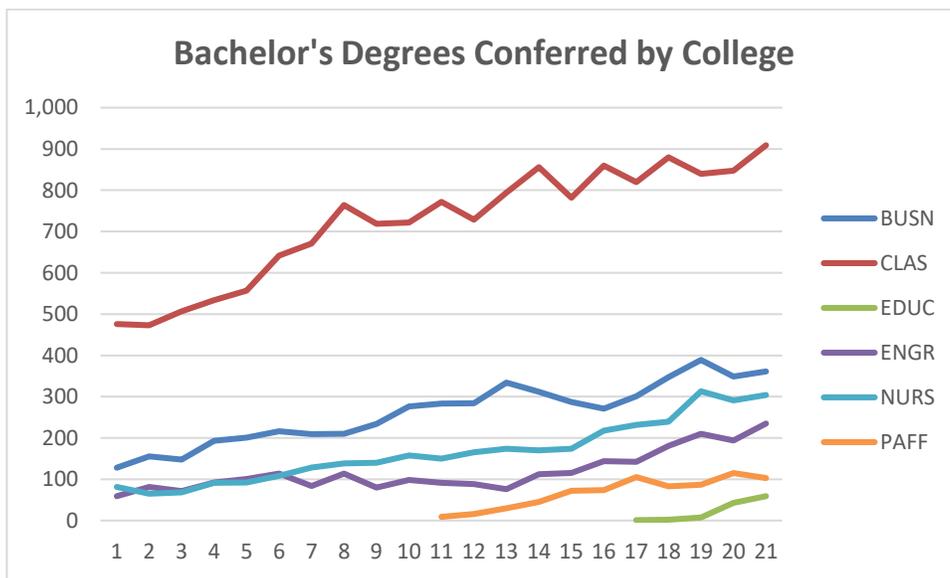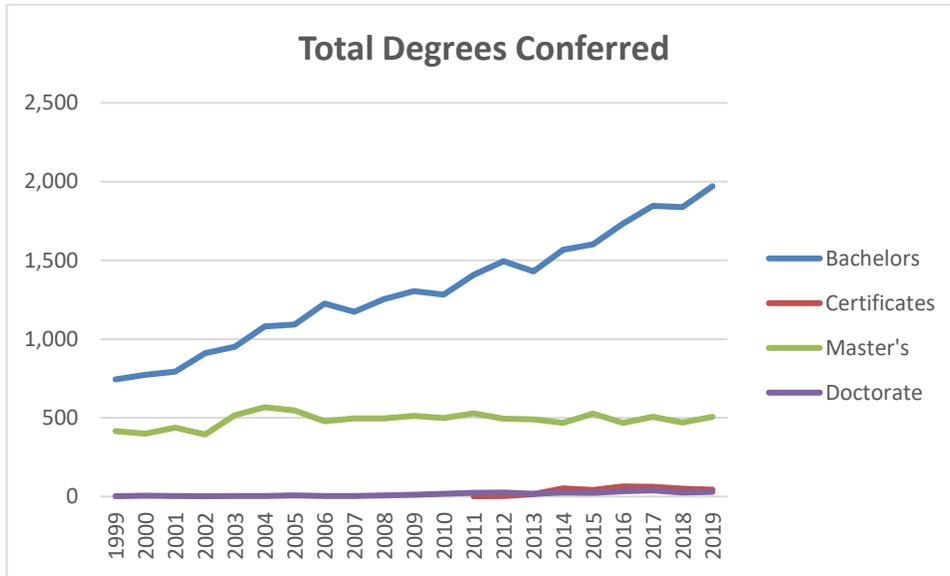
Number of PhD Conferrals by Program

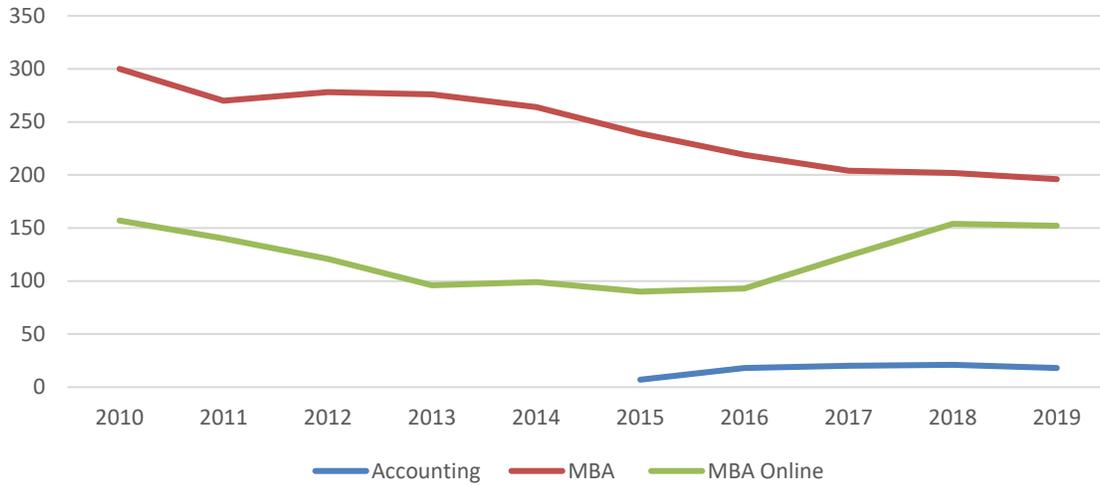| Year	*CS*	*ECE*	*MAE*	*Sec*	*Eng*	*Psych*	*LERP*	*Physics*	*Math*	Yearly Total
2010	0	0	2		1	2	5			**10**
2011	0	2	1		0	1	4	1		**9**
2012	0	3	0		1	6	10	0		**20**
2013	2	0	0	1	2	2	8	0		**15**
2014	3	0	0	1	2	5	6	3		**20**
2015	5	1	2	3	0	0	6	0		**17**
2016	6	0	2	3	0	3	12	2		**28**
2017	4	2	0	3	1	3	15	1		**29**
2018	2	5	1	5	0	3	5	2		**23**
2019	2	7	0	4	0	0	10	2	1	**26**
Program Total	**24**	**20**	**8**	**20**	**7**	**25**	**81**	**11**	**1**	**197**

Doctoral Enrollments 2010 - 2019
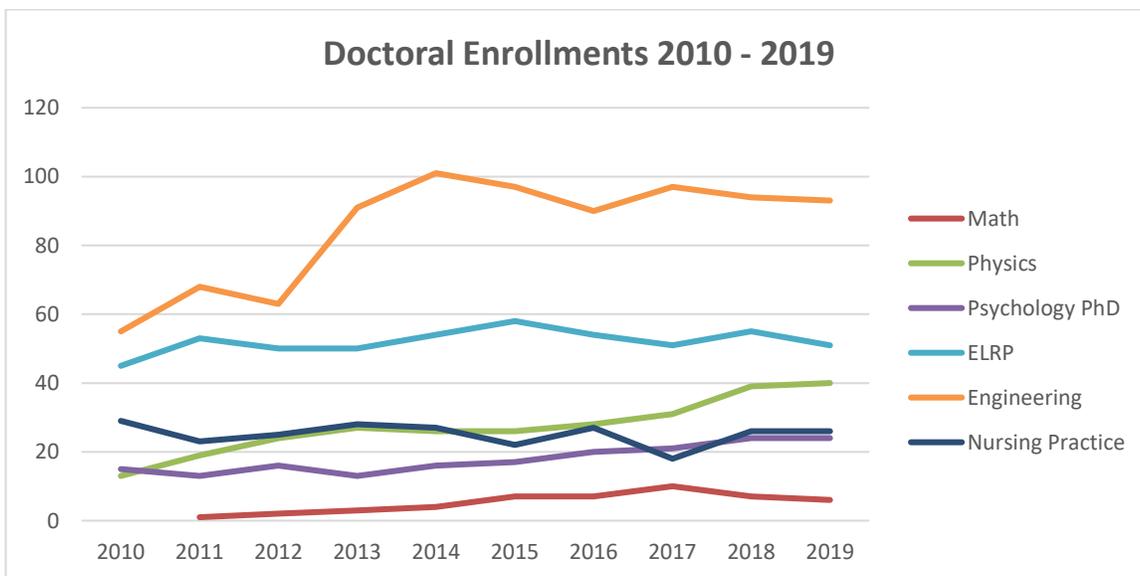
UCCS Graduate Enrollments 2010 - 2019

Graduate and Undergraduate Enrollments Fall Semester

Graduate Enrollments by College

JBEL Programs Fall Enrollments 2010 - 2019
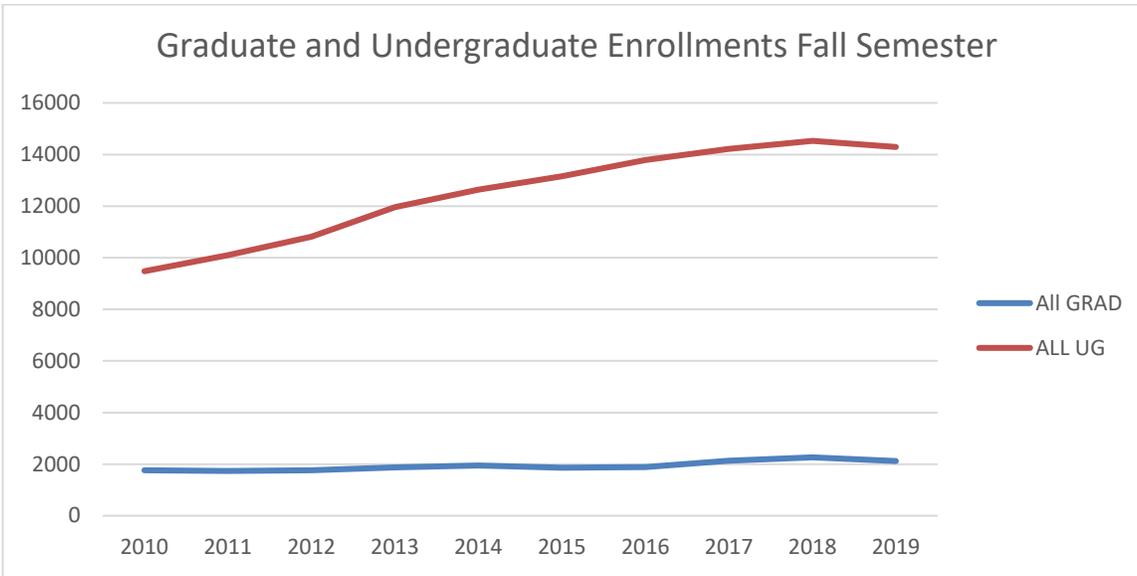
Business Programs Fall Enrollments 2010 - 2019

— Accounting — MBA — MBA Online

SPA Programs Fall Enrollments 2010 - 2019

— Public Administration — Criminal Justice
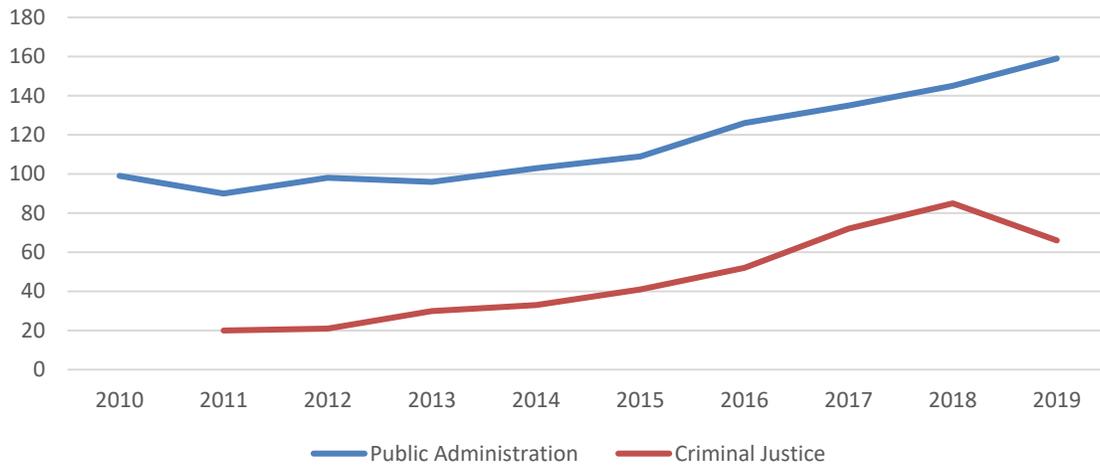
Education Programs Fall Enrollments 2010 - 2019

— Counseling and Human Services — ELRP
— Leadership — Curriculum and Instruction
— Special Education — TESOL
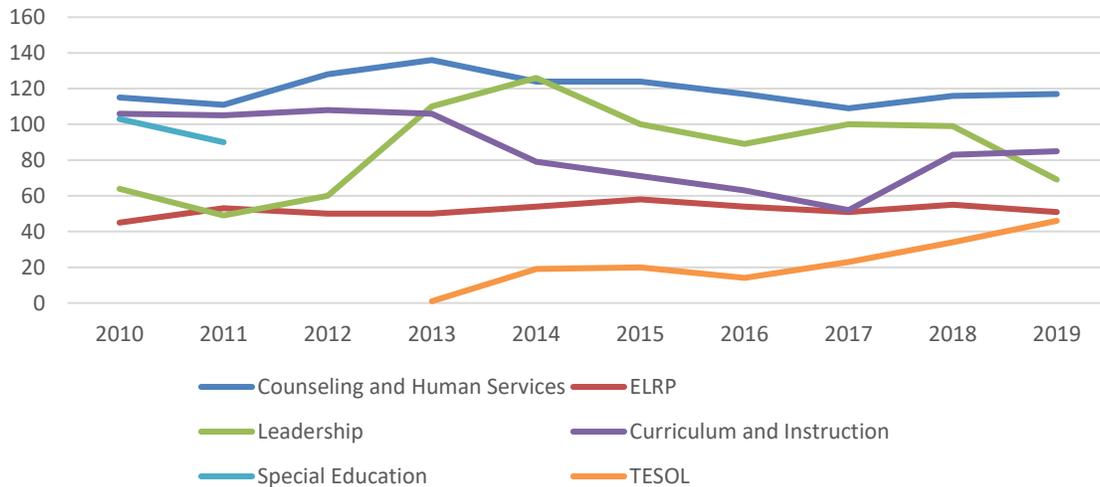
LAS Master's Only Program Fall Enrollments 2010 -2019

Legend: Biology, Biochemistry, Chemistry, Communication, Applied Geography, History, Sociology

LAS PhD and Master's Program Fall Enrollments 2010 - 2019

Legend: Physics PhD, Physics MS, Psychology PhD, Psychology MA, Math PhD, Math MS, Math MSc

EAS Phd and Master's Program Fall Enrollments 2010 - 2019

Legend: CS MS, ECE MS, Eng ME, MAE MS, ENG PhD