Minutes of the Campus Curricula Committee Meeting
October 20, 2022
8:15am, Bertelsmeyer 110H
(For Faculty Senate Meeting on November 10, 2022)

Attendees: Petra Dewitt, Katie Shannon, Michael Davis, Mark Fitch, Kyle Perry, Cecil Eng Huang Chua, Michael Gosnell, David Borrok, Evie Sherlock, Jennifer Pohlsander

The following curriculum forms were discussed and approved:

Course Change Forms:

File: 4900	COMP ENG 5320 : Game Theory for Computing
File: 4899	COMP ENG 6340 : Machine Learning in Computer Vision
File: 4746.4	EDUC 2401 : School, Family, and Community Partnerships
File: 4747.3	EDUC 2440 : Observation and Assessment of Young Children
File: 941.7	EDUC 3211 : Child Development
File: 1917.1	SYS ENG 6541 : Digital Engineering

The following curriculum forms were discussed and postponed:

Course Change Forms:

File: 4898	AERO ENG 6410 : Optimal Control and Estimation
File: 4897	AERO ENG 6430 : Robust Control Systems
File: 4895	MECH ENG 6410 : Optimal Control and Estimation
File: 4896	MECH ENG 6430 : Robust Control Systems

The Campus Curricula Committee recommends to the Faculty Senate, the adoption of the proposal to revise the Engineering undergraduate degree requirements in the catalog from 128-132 to 120-130 credit hours.

Old Business:
Reviewed degree certificate graduation numbers over the past five years.

The meeting adjourned at 9:04 a.m.

Petra DeWitt

Petra DeWitt, Chair
Missouri S&T Campus Curricula Committee

Course Change Request

New Course Proposal

Date Submitted: 09/27/22 10:49 am

Viewing: **COMP ENG 5320 : Game Theory for Computing**

File: 4900

Last edit: 10/04/22 11:21 am

Changes proposed by: stanleyj

Requested Effective Change Date	Fall 2023
Department	Electrical and Computer Engineering
Discipline	Computer Engineering (COMP ENG)
Course Number	5320
Title	Game Theory for Computing
Abbreviated Course Title	Game Theory for Comput

Catalog Description

This course introduces the mathematical and computational foundations of game theory, and its applications to computer science (e.g., cybersecurity, robotics and networking). Topics include decision rationality, game representations, equilibrium concepts (e.g., Nash equilibrium), Bayesian games, dynamic games, cooperative game theory, and mechanism design.

Prerequisites

A grade of "C" or better in both Comp Sci 2500 and Math 3108, and in one of Stat 3113, Stat 3115, Stat 3117, or Stat 5643.

Field Trip Statement

Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0
Total: 3				

In Workflow

1. **RELECENG Chair**
2. **CCC Secretary**
3. **Engineering DSCC Chair**
4. **Pending CCC Agenda post**
5. **CCC Meeting Agenda**
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 09/27/22 1:04 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/04/22 12:44 pm Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 10/05/22 9:16 am Mark Fitch (mfitch): Approved for Engineering DSCC

Required for Majors	No
Elective for Majors	Yes

Chair
4. 10/05/22 2:35 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post

Justification for new course:

Co-listing CS 5408 as Comp Eng 5320 to give graduate students in Computational Intelligence an additional 5xxx option. The content CS 5408 is consistent with other Comp Eng Computational Intelligence course options.

Semesters previously offered as an experimental course

Co-Listed Courses: COMP SCI 5408 - Game Theory for Computing

Course Reviewer Comments

jpnfd (10/04/22 9:22 am): Updated term to Summer 23. Updated format and corrected typos in catalog description and prerequisites.
jpnfd (10/04/22 11:21 am): Changed to Fall 23 per CCC deadlines.

Key: 4900

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 09/27/22 10:40 am

Viewing: **COMP ENG 6340 : Machine Learning in Computer Vision**

File: 4899

Last edit: 10/04/22 11:21 am

Changes proposed by: stanleyj

Requested Effective Change Date	Fall 2023
Department	Electrical and Computer Engineering
Discipline	Computer Engineering (COMP ENG)
Course Number	6340
Title	Machine Learning in Computer Vision
Abbreviated Course Title	ML in Computer Vision

Catalog Description

Introduces machine learning fundamentals in current computer vision research. Topics include modeling complex data densities, regression and classification models, graphical models such as chains, trees, and grids, temporal models such as particle filtering and models for visual recognition such as deep learning. Students will implement select course topics.

Prerequisites

A grade of "C" or better in either Comp Sci 5402 or Comp Sci 5404.

Field Trip Statement

Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0
Total: 3				

In Workflow

1. **RELECENG Chair**
2. **CCC Secretary**
3. **Engineering DSCC Chair**
4. **Pending CCC Agenda post**
5. **CCC Meeting Agenda**
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 09/27/22 1:04 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/04/22 12:44 pm Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 10/05/22 9:16 am Mark Fitch (mfitch): Approved for Engineering DSCC

Required for Majors	No
Elective for Majors	No

Chair
4. 10/05/22 2:36 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post

Justification for new course:

Co-listing CS 6406 as Comp Eng 6340 to give graduate students in Computational Intelligence an additional 6xxx option. The content CS 6406 is consistent with other Comp Eng Computational Intelligence course options.

Semesters previously offered as an experimental course

Co-Listed Courses: COMP SCI 6406 - Machine Learning in Computer Vision

Course Reviewer Comments

jpnfd (10/04/22 9:25 am): Updated term to Summer 23. Corrected typos and format errors in catalog description and prerequisites.
jpnfd (10/04/22 11:21 am): Changed to Fall 23 per CCC deadlines.

Key: 4899

Preview Bridge

Course Change Request

Date Submitted: 09/12/22 2:16 pm

Viewing: **EDUC 2401 : School, Family, and Community Partnerships**

File: 4746.4

Last approved: 02/13/21 6:01 am

Last edit: 09/20/22 4:08 pm

Changes proposed by: bakm75

Programs referencing this course	EDUC-BS: Education BS

Requested Effective Change Date	Fall 2023 ~~2021~~
Department	Teacher Education and Certification
Discipline	Education (EDUC)
Course Number	2401
Title	School, Family, and Community Partnerships
Abbreviated Course Title	School, Family, Comm

Catalog Description

Students will examine available community resources and their impact on children and families. Students will practice strategies to support family engagement. Effective communication and collaboration with diverse families will be emphasized.

Prerequisites

Educ 1040 or ~~and~~ Educ 1055. ~~1174 and Educ 1820.~~

Field Trip Statement

In Workflow

1. **REDUCATION Chair**
2. **CCC Secretary**
3. **Social Sciences DSCC Chair**
4. **Pending CCC Agenda post**
5. **CCC Meeting Agenda**
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 09/20/22 10:55 am
   Beth Kania-Gosche (bkaniagosche): Approved for REDUCATION Chair
2. 09/21/22 11:07 am
   Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 09/21/22 12:30

Credit Hours Total: 3	LEC: 3	LAB: 0	IND: 0	RSD: 0
Required for Majors	Yes			
Elective for Majors	Yes			

Justification for change:

Submission of undergraduate certificate in education of young children proposal required a revision of course sequence and prerequisite options for those only in certificate courses. All early childhood courses count as training for the Child Development Associate, a national credential.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments	**jpnfd (09/20/22 4:08 pm):** Updated to FS23 Standardized prereq

pm
Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair

4. 10/05/22 2:36 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post

History

1. Feb 13, 2021 by Beth Kania-Gosche (bkaniagosche)

Key: 4746

Preview Bridge

Course Change Request

Date Submitted: 09/12/22 2:13 pm

Viewing: **EDUC 2440 : Observation and Assessment of Young Children**

File: 4747.3

Last approved: 02/08/21 6:01 am

Last edit: 09/28/22 11:49 am

Changes proposed by: bakm75

Programs referencing this course	EDUC-BS: Education BS

Requested Effective Change Date	Fall 2023 ~~2021~~
Department	Teacher Education and Certification
Discipline	Education (EDUC)
Course Number	2440
Title	Observation and Assessment of Young Children
Abbreviated Course Title	Obs & Assmnt Young Child

Catalog Description

Students will discuss the purpose, benefits, and uses of informal and formal assessments of children. Students will practice interpreting and communicating assessment results while maintaining confidentiality. Assessment results will be used to plan developmentally appropriate curriculum. Students will administer an observation assessment in the field.

Prerequisites

Educ 1040 or Educ 1055. ~~1040.~~

Field Trip

In Workflow

1. REDUCATION Chair
2. CCC Secretary
3. Social Sciences DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 09/20/22 10:56 am
   Beth Kania-Gosche (bkaniagosche): Approved for REDUCATION Chair
2. 09/21/22 11:11 am
   Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 09/21/22 12:30

Statement				
Credit Hours Total: 3	LEC: 2	LAB: 1	IND: 0	RSD: 0
Required for Majors	Yes			
Elective for Majors	Yes			

Justification for change:

Submission of undergraduate certificate in education of young children requires another option.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments	**jpnfd (09/21/22 11:09 am):** Updated prerequisite format, updated to Fall 23 **jpnfd (09/28/22 11:49 am):** Prerequisite format update

Key: 4747

Preview Bridge

pm
Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair

4. 10/05/22 2:37 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post

History

1. Feb 8, 2021 by Beth Kania-Gosche (bkaniagosche)

Course Change Request

Date Submitted: 09/12/22 2:17 pm

Viewing: EDUC 3211 : Child Development

File: 941.7

Last approved: 02/13/21 6:01 am

Last edit: 10/05/22 1:46 pm

Changes proposed by: bakm75

Programs referencing this course	EDUC-BS: Education BS

Requested Effective Change Date	Fall 2023 ~~2021~~
Department	Teacher Education and Certification
Discipline	Education (EDUC)
Course Number	3211
Title	Child Development
Abbreviated Course Title	Child Development

Catalog Description

This course explores characteristics of children from birth to age eight, including language acquisition, creative expression, and physical, cognitive, and social-emotional development. The impact of trauma on development will be emphasized. The connection of cultural differences to development will also be discussed.

Prerequisites

Educ 1040 or Educ 1055 or Psych 1101.

Field Trip Statement

In Workflow

1. REDUCATION Chair
2. CCC Secretary
3. Social Sciences DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 09/20/22 10:56 am
   Beth Kania-Gosche (bkaniagosche): Approved for REDUCATION Chair
2. 09/21/22 11:20 am
   Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 09/21/22 12:30

Credit Hours Total: 3	LEC: 3	LAB: 0	IND: 0	RSD: 0
Required for Majors	Yes			
Elective for Majors	Yes			

Justification for change:

The submission of the proposal for an undergraduate certificate in Education of Young Children required a revision of prerequisites.

DESE no longer accepts Child Psychology; students take Developmental Psychology which is through the entire lifespan.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments	**jpnfd (09/21/22 11:18 am):** Updated prerequisite format, Changed to Fall 2023 **jpnfd (10/05/22 1:46 pm):** Prerequisite format updated to show that one of the three listed prerequisite courses must be taken, per department email 10/5/22.

pm
Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair

4. 10/05/22 2:37 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post

History

1. Jan 18, 2019 by ershenb (941.1)
2. Feb 13, 2021 by bakm75 (941.3)

Key: 941

Preview Bridge

Course Change Request

Date Submitted: 09/16/22 2:53 pm

Viewing: **SYS ENG 6541 : Digital Engineering ~~Distributed Systems Modeling~~**

File: 1917.1

Last edit: 09/16/22 3:00 pm

Changes proposed by: dagli

Requested Effective Change Date	Fall 2023 ~~2014~~
Department	Engineering Management and Systems Engineering
Discipline	Systems Engineering (SYS ENG)
Course Number	6541
Title	Digital Engineering ~~Distributed Systems Modeling~~
Abbreviated Course Title	Digital Engineering ~~Dist Systems Modeling~~

Catalog Description

This course discusses ~~will discuss~~ issues related to distributed systems architecting, modeling, analysis and representation, with specific focus on the digital system engineering ~~discrete-part manufacturing~~ domain. Distributed modeling techniques and other model decomposition methods using simulation modeling and scalability issues will also be addressed.

Prerequisites

Field Trip Statement

Credit Hours Total: 3	LEC: 3	LAB: 0	IND: 0	RSD: 0

Required for No

In Workflow

1. **RENGMNGT Chair**
2. **CCC Secretary**
3. **Engineering DSCC Chair**
4. **Pending CCC Agenda post**
5. **CCC Meeting Agenda**
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 09/16/22 3:00 pm David Enke (enke): Approved for RENGMNGT Chair
2. 09/21/22 11:15 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 10/05/22 9:16 am Mark Fitch (mfitch): Approved for

Majors	
Elective for Majors	No

Engineering DSCC Chair

4. 10/05/22 2:38 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post

Justification for change:

The Digital Engineering title is more appropriate considering the changes happening in industry due to digital transformations in engineering and systems architecting applications.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer Comments

Key: 1917

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 09/21/22 3:10 pm

Viewing: **AERO ENG 6410 : Optimal Control and Estimation**

File: 4898

Last edit: 10/21/22 8:51 am

Changes proposed by: nisbett

Requested Effective Change Date	Fall 2023
Department	Mechanical & Aerospace Engineering
Discipline	Aerospace Engineering (AERO ENG)
Course Number	6410
Title	Optimal Control and Estimation
Abbreviated Course Title	Optimal Control

Catalog Description

Review of linear quadratic regulators, LQR extensions; constrained optimization (Pontragin's minimum principle); review of probability theory and random processes; optimal prediction and filters; frequency domain properties of LQR and Kalman filters; linear quadratic Gaussian (LQG) control; model uncertainties, frequency shaping, LQG/LTR design methodology.

Prerequisites

Elec Eng 6300 or Mech Eng 5481 or Aero Eng 5481.

Field Trip Statement

Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0
Total: 3				

In Workflow

1. **RMECHENG Chair**
2. **CCC Secretary**
3. **Engineering DSCC Chair**
4. **Pending CCC Agenda post**
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 09/21/22 3:16 pm David Bayless (djbkqf): Approved for RMECHENG Chair
2. 09/27/22 8:30 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 10/05/22 9:16 am Mark Fitch (mfitch): Approved for Engineering DSCC Chair

Required for Majors	No
Elective for Majors	Yes

4. 10/05/22 2:34 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 10/21/22 9:18 am Evie Sherlock (esdk3): Rollback to Pending CCC Agenda post for CCC Meeting Agenda

Justification for new course:

This is adding ME and AE colistings for the existing Elec Eng 6310, to allow greater access to this topic from all three majors. The only change from the existing Elec Eng 6310 is to expand the options for prereqs. Elec Eng is concurrently submitting the same prereq changes.

Semesters previously offered as an experimental course	The experimental phase is not required since this course is being added as a colist for an existing course.
Co-Listed Courses:	MECH ENG 6410 - Optimal Control and Estimation ELEC ENG 6310 - Course Not Found
Course Reviewer Comments	**jpnfd (09/26/22 1:00 pm):** Added punctuation to prerequisites. **esdk3 (10/21/22 9:18 am):** Rollback: Rollback to be resubmitted/reviewed along with EE 6310. -es 10/21/22

Key: 4898

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 09/21/22 3:08 pm

Viewing: **AERO ENG 6430 : Robust Control Systems**

File: 4897

Last edit: 10/21/22 9:25 am

Changes proposed by: nisbett

Requested Effective Change Date	Fall 2023
Department	Mechanical & Aerospace Engineering
Discipline	Aerospace Engineering (AERO ENG)
Course Number	6430
Title	Robust Control Systems
Abbreviated Course Title	Robust Control Systems

Catalog Description

Performance and robustness of multivariable systems, linear fractional transformations, LQG/LTR advanced loop shaping, Youla parameterization, H (subscript infinity) optimal control, mixed H (subscript 2) and H (subscript infinity) control, controller synthesis for multiple objective optimal control, linear matrix inequalities theory and case studies.

Prerequisites

Elec Eng 6300 or Mech Eng 5481 or Aero Eng 5481.

Field Trip Statement

Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0
Total: 3				
Required for	No			

In Workflow

1. **RMECHENG Chair**
2. **CCC Secretary**
3. **Engineering DSCC Chair**
4. **Pending CCC Agenda post**
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 09/21/22 3:09 pm David Bayless (djbkqf): Approved for RMECHENG Chair
2. 09/30/22 3:49 pm Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 10/05/22 9:16 am Mark Fitch (mfitch): Approved for Engineering DSCC Chair

Majors	
Elective for Majors	Yes

4. 10/05/22 2:35 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 10/21/22 9:18 am Evie Sherlock (esdk3): Rollback to Pending CCC Agenda post for CCC Meeting Agenda

Justification for new course:

This is adding ME and AE colistings for the existing Elec Eng 6330, to allow greater access to this topic from all three majors. The only change from the existing Elec Eng 6330 is to expand the options for prereqs. Elec Eng is concurrently submitting the same prereq changes.

We request effective date of Spring 2023, since the Elec Eng course already exists, and since it will already be on the schedule for Spring 2023.

Semesters previously offered as an experimental course	The experimental phase is not required since this course is being added as a colist for an existing course.
Co-Listed Courses:	MECH ENG 6430 - Robust Control Systems ELEC ENG 6330 - Course Not Found
Course Reviewer Comments	**jpnfd (09/26/22 1:13 pm):** Added punctuation to prerequisites. **jpnfd (09/28/22 9:22 am):** Effective date Spring 23 per CCC Chair email 9/27/22 **esdk3 (10/21/22 9:18 am):** Rollback: Rollback to be resubmitted/reviewed along with EE 6330. -es 10/21/22 **esdk3 (10/21/22 9:25 am):** updated effective term to FS23 as discussed at CCC mtg. This will be re-submitted/reviewed along with the EE 6330 course change submission. -es 10.21.22

Key: 4897

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 09/21/22 3:00 pm

Viewing: **MECH ENG 6410 : Optimal Control and Estimation**

File: 4895

Last edit: 10/21/22 8:52 am

Changes proposed by: nisbett

Requested Effective Change Date	Fall 2023
Department	Mechanical & Aerospace Engineering
Discipline	Mechanical Engineering (MECH ENG)
Course Number	6410
Title	Optimal Control and Estimation
Abbreviated Course Title	Optimal Control

Catalog Description

Review of linear quadratic regulators, LQR extensions; constrained optimization (Pontragin's minimum principle); review of probability theory and random processes; optimal prediction and filters; frequency domain properties of LQR and Kalman filters; linear quadratic Gaussian (LQG) control; model uncertainties, frequency shaping, LQG/LTR design methodology.

Prerequisites

Elec Eng 6300 or Mech Eng 5481 or Aero Eng 5481.

Field Trip Statement

Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0
Total: 3				

In Workflow

1. **RMECHENG Chair**
2. **CCC Secretary**
3. **Engineering DSCC Chair**
4. **Pending CCC Agenda post**
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 09/21/22 3:06 pm David Bayless (djbkqf): Approved for RMECHENG Chair
2. 09/27/22 8:31 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 10/05/22 9:16 am Mark Fitch (mfitch): Approved for Engineering DSCC Chair

Required for Majors	No
Elective for Majors	Yes

4. 10/05/22 2:37 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 10/21/22 9:18 am Evie Sherlock (esdk3): Rollback to Pending CCC Agenda post for CCC Meeting Agenda

Justification for new course:

This is adding ME and AE colistings for the existing Elec Eng 6310, to allow greater access to this topic from all three majors. The only change from the existing Elec Eng 6310 is to expand the options for prereqs. Elec Eng is concurrently submitting the same prereq changes.

Semesters previously offered as an experimental course	The experimental phase is not required since this course is being added as a colist for an existing course.
Co-Listed Courses:	AERO ENG 6410 - Optimal Control and Estimation ELEC ENG 6310 - Course Not Found
Course Reviewer Comments	**jpnfd (09/26/22 1:00 pm):** Added punctuation to prerequisites. **esdk3 (10/21/22 9:18 am):** Rollback: Rollback to be resubmitted/reviewed along with EE 6310. -es 10/21/22

Key: 4895

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 09/21/22 2:58 pm

Viewing: **MECH ENG 6430 : Robust Control Systems**

File: 4896

Last edit: 10/21/22 9:21 am

Changes proposed by: nisbett

Requested Effective Change Date	Fall 2023
Department	Mechanical & Aerospace Engineering
Discipline	Mechanical Engineering (MECH ENG)
Course Number	6430
Title	Robust Control Systems
Abbreviated Course Title	Robust Control Systems

Catalog Description

Performance and robustness of multivariable systems, linear fractional transformations, LQG/LTR advanced loop shaping, Youla parameterization, H (subscript infinity) optimal control, mixed H (subscript 2) and H (subscript infinity) control, controller synthesis for multiple objective optimal control, linear matrix inequalities theory and case studies.

Prerequisites

Elec Eng 6300 or Mech Eng 5481 or Aero Eng 5481.

Field Trip Statement

Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0
Total: 3				
Required for	No			

In Workflow

1. **RMECHENG Chair**
2. **CCC Secretary**
3. **Engineering DSCC Chair**
4. **Pending CCC Agenda post**
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 09/21/22 3:06 pm David Bayless (djbkqf): Approved for RMECHENG Chair
2. 09/30/22 3:49 pm Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 10/05/22 9:16 am Mark Fitch (mfitch): Approved for Engineering DSCC Chair

Majors	
Elective for Majors	Yes

4. 10/05/22 2:38 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 10/21/22 9:19 am Evie Sherlock (esdk3): Rollback to Pending CCC Agenda post for CCC Meeting Agenda

Justification for new course:

This is adding ME and AE colistings for the existing Elec Eng 6330, to allow greater access to this topic from all three majors. The only change from the existing Elec Eng 6330 is to expand the options for prereqs. Elec Eng is concurrently submitting the same prereq changes.

We request an effective date of Spring 2023, since the course is planned to be offered then, and the home course already exists and will already be on the Spring 2023 schedule.

Semesters previously offered as an experimental course	The experimental phase is not required since this course is being added as a colist for an existing course.
Co-Listed Courses:	AERO ENG 6430 - Robust Control Systems ELEC ENG 6330 - Course Not Found
Course Reviewer Comments	**jpnfd (09/26/22 1:12 pm):** Added punctuation to prerequisites. **jpnfd (09/28/22 9:21 am):** Effective date Spring 23 per CCC Chair email 9/27/22 **esdk3 (10/21/22 9:19 am):** Rollback: Rollback to be resubmitted/reviewed along with EE 6330. -es 10/21/22 **esdk3 (10/21/22 9:21 am):** updated effective term to FS23 as discussed at CCC mtg. This will be re-submitted/reviewed along with the EE 6330 course change submission. -es 10.21.22

Key: 4896

Preview Bridge

MISSOURI S&T | College of Engineering and Computing

September 7, 2022

Subject: Requested Revision to Engineering Degree Requirements in Catalog

The engineering degree requirements in our undergraduate catalog currently state that, “The requirements of the degree program shall consist of 128 to 132 credit hours.”

We request revision of this statement to the following: “The requirements of the degree program shall consist of 120 to 130 credit hours”.

None of our engineering degree programs currently require more than 130 hours, so the new upper bound will not impact us. Changing the lower bound to 120 credit hours (the minimum required for ABET accreditation) will provide engineering departments and programs with the flexibility of being able to lower their credit hour degree requirements if they choose to do so in the future.

It is important to make this change now because the CEC is embarking on a curriculum review process for all our undergraduate programs. Through this review process we hope to streamline our course offerings and prerequisites with the goal of lowering the time to degree for our students and decreasing their financial burden. As part of the process, some departments may choose to lower the number of required credit hours for their degree programs below what is currently specified in the catalog.

This request is supported by me, the acting dean for the Kummer College, the CEC department chairs, and the department chair for Engineering Management and Systems Engineering.

Sincerely,

David Borrok
Interim Vice-Provost and Dean
College of Engineering and Computing

305 McNutt Hall | 1400 Bishop Avenue | Rolla, MO 65409 | 573-341-4153 | borrokd@mst.edu | cec.mst./edu