

Faculty Senate

December 4, 2019 Order of Business 4:30 p.m. in WALL 309 www.coastal.edu/facultysenate

- I. CALL TO ORDER Brian Bunton, Chair
- II. ROLL CALL Diane Fribance, Secretary
- III. APPROVAL OF MINUTES November 6, 2019
- IV. CONSENT AGENDA attached
- V. PRESIDENT, PROVOST AND OTHER ADMINISTRATIVE REPORTS
- VI. EXECUTIVE COMMITTEE REPORT
  - A. Undergraduate Administrative Action 5-6 were generated and approved from the November 6, 2019 meeting. Refer to the November 6, 2019 Faculty Senate Order of Business for complete details.
    AA-5: Approval of items from November 6, 2019 Consent Agenda
    AA-6: Approval of the new undergraduate program, effective Fall 2020: Visual Art, B.F.A.

### VII. COMMITTEE REPORTS

### VIII. OLD BUSINESS

- IX. NEW BUSINESS
  - A. Academic Affairs Committee (moved and seconded in committee)
  - **1. Motion**: Proposal for a new undergraduate program Music: Music Education, B.M.E.

### Music: Music Education, B.M.E. (Form D – ID# 2260)

The Bachelor of Music Education degree seeks to provide music students with a four-year undergraduate degree in Music Education with Initial Licensure (Grades PK-12; Choral or Instrumental). It is designed to attract music students who wish to become music educators

and pursue jobs as public school music teachers at the elementary, middle school, or high school level in general music, choral music, or instrumental music. The degree program requires students to take core courses (university, music, and education), foundational music education courses, and major coursework in choral or instrumental music education. The curriculum is designed to develop in students a keen understanding of sequential music instruction and pedagogy at all levels.

### **Student Learning Outcomes**

Students who complete the requirements for the degree in Music Education will be able to do the following:

- 1. Incorporate pedagogical methods, materials, and repertories appropriate to the teaching specialization.
- 2. Demonstrate knowledge of current methodologies and the ability to deliver instruction successfully to diverse groups of students
- 3. Perform competently on primary and secondary instruments and as a member of a major ensemble.
- 4. Demonstrate a disposition that reflects the attitudes, beliefs, and values for successful music instruction.

### Music: Music Education, B.M.E.

### **Degree Requirements (129-130 Credits)**

### **Core Curriculum (39 credits)**

# **Graduation Requirement (6 credits)**

### I. MUSIC FOUNDATION COURSES (28 credits)

- MUS 100 Recital Class (7 semesters; 0 credits) (0 credits)
- MUS 115 Concepts and Elements of Music Theory (3 credits)
- MUS 116 Principles of Harmony and Voice Leading (3 credits)
- MUS 117 Ear Training and Sight Singing I (1 credit)
- MUS 118 Ear Training and Sight Singing II (1 credit)
- MUS 119 Introduction to Music Technology (2 credits)
- MUS 172 Class Piano I (1 credit)
- MUS 173 Class Piano II (1 credit)
- MUS 215 Chromatic Harmony and Modulation (3 credit)
- MUS 216 Musical Structures (3 credits)
- MUS 217 Ear Training and Sight Singing III (1 credit)
- MUS 218 Ear Training and Sight Singing IV (1 credit)
- MUS 253 History of Western Music I (3 credits)
- MUS 254 History of Western Music II (3 credits)
- MUS 272 Class Piano III (1 credit)
- MUS 273 Class Piano IV (1 credit)

• Music Ensemble (4 semesters; 0 credits)

# II. PERFORMANCE REQUIREMENTS (7 credits)

- Applied Music (7 semesters; 1 credit each semester) (7 credits)
- MUS 400 Senior Recital (0 credits)
- Music Ensemble (3 semesters; 0 credit each semester; instrumental education majors required to take 2 semesters of MUS 124M)

### **III. PROFESSIONAL EDUCATION REQUIREMENTS (18 credits)**

- EDUC 111 Exploring Teaching as a Profession (3 credits)
- EDUC 204 Q Computer Technology and Instructional Media (3 credits)
- EDUC 215 Q Schools and Diversity (3 credits)
- EDUC 335 Introduction to Educational Psychology (3 credits)
- EDSP 200 Q Foundations of Special Education (3 credits)
- EDLL 484 Content Area Reading and Writing (3 credits)

# **MUSIC EDUCATION CORE (19 credits)**

- MUS 333 Conducting and Score Reading (2 credits)
- MUED 200 Mid-Program Review (0 credits)
- MUED 321 Music Methods Grades PK-2 (2 credits)
- MUED 353 General Music Methods, Grades 6-12 (1 credit)
- MUED 421 Music Methods for Grades 3-5 (2 credits)
- EDMU 479 Internship in Music Education (PK-12) (9 credits)
- EDMU 496 Music Internship Seminar (3 credits)

# IVA. VOCAL MUSIC EDUCATION BLOCK (12 credits)

- MUS 334 Choral Conducting (2)
- MUED 175 Choral Diction (2)
- MUED 245 Brass and Winds Techniques for Vocalists (2)
- MUED 291 Fundamentals of Percussion Instruments (1)
- MUED 292 Fundamentals of String Instruments (1)
- MUED 440 Choral Methods I, Grades 4-8 (2)
- MUED 441 Choral Methods II, Grades 9-12 (2)

# OR

# IVB. INSTRUMENTAL EDUCATION BLOCK (13 credits)

- MUS 334B Instrumental Conducting (2 credits)
- MUED 165 Class Voice I (2 credits)
- MUED 237 Choral Techniques for Instrumentalists (1 credit)
- MUED 291 Fundamentals of Percussion Instruments (1 credit)
- MUED 292 Fundamentals of String Instruments (1 credit)

- MUED 391 Fundamentals of Brass Instruments (1 credit)
- MUED 392 Fundamentals of Woodwind Instruments (1 credit)
- MUED 443 Instrumental Music Methods I, Grades 6-8 (2 credits)
- MUED 444 Instrumental Music Methods II, Grades 9-12 (2 credits)

# Total Credits Required: 129-130 Credits

2. Motion: Proposal for a new undergraduate program – Human-Environment Geography Minor

# Human-Environment Geography Minor (Form D – ID# 2465)

The minor in Human-Environment Geography gives students a focused area of study in the prominent sub-discipline of Geography centered on sustainability, human-environment relationships and human dimensions of global environmental change. It trains students to synthesize the physical and human aspects of geography through a complex and holistic theoretical approach, and introduces them to the use of mixed methods research that human-environment geographers employ.

# Minor Requirements (18 Credits):

Students may not count more than two courses towards both their major and the minor.

Students must earn a grade of "C" or better in the following:

# **Required Courses: (10 credits)**

- GEOG 120 Cultures and Environments (3 credits)
- GEOG 201 Introduction to Physical Geography (3 credits)
- GEOG 201L Introduction to Physical Geography Lab (1 credits)
- GEOG 300 Human Landscapes (3 credits)

# Electives (choose a minimum of 8 credits from the following): (8 credits)

- GEOG 200 Digital Earth (3 credits)
- GEOG 301 Concepts in Geography (3 credits)
- GEOG 320 Introduction to Weather and Climate (3 credits)
- GEOG 331 Topics in Historical Geography (3 credits)
- GEOG 341 Geography of Food and Agriculture (3 credits)
- GEOG 342 Forests and People (3 credits)
- GEOG 342L Forests and People lab (1 credit)
- GEOG 351 Spiritual Landscapes (3 credit)
- GEOG 399 Independent Study\* (1-6 credits)
- GEOG 495 Q Internship in Geography/GIS\* (1-12 credits)

\*Note: Sections of these courses that involve relevant content are approved for this minor. See the minor adviser.

### **Total Credits Required: 18 credits**

**3. Motion:** Proposal for a new undergraduate program – Visual Communication Design, B.F.A.

### Visual Communication Design, B.F.A. (Form D – ID#2464)

<u>Curriculum</u> (Minimum grade of 'C' required in all Foundation and Major Requirements)

### **Degree: Bachelor of Fine Arts in Visual Communication Design (120-121 Credits)**

A portfolio entrance evaluation is required for acceptance into the B.F.A. Students must complete 27 required credits in art and design foundations before an application can be submitted. Students must maintain G.P.A. of 2.5 and must earn a minimum grade of C for all Foundations and Major requirements.

I. CORE CURRICULUM (38-40 Credits)

# II. FRESHMAN GRADUATION REQUIREMENTS (3-6 Credits)

### III. ART FOUNDATION COURSES (15 CREDITS)

- ARTS 103 Fundamentals of Art (3 credits)
- ARTS 104 Fundamentals of Art II (3 credits)
- ARTS 105 Fundamentals of Art III (3 credits)
- ARTS 111 Fundamentals of Drawing I. (3 credits)
- ARTS 112 Fundamentals of Drawing II (3 credits)

IV. DESIGN FOUNDATION COURSES (12 CREDITS)

- ARTD 108 Survey of Graphic Design (3 credits)
- ARTD 201 Graphic Design I (3 credits)
- ARTD 208 Typography I (3 credits)
- ARTD 202 Graphic Design II (3 credits)

# V. ART HISTORY COURSES (12 CREDITS)

- ARTH 106 History of Western Art II (3 credits)
- ARTH 250 Concepts in Art History (3 credits)
- ARTH course (3 credits):

Choose one 3 credit hour course from:

- ARTH 105 History of Western Art I (3 credits)
- ARTH 107 World Art (3 credits)
- ARTH course (3 credits):

Choose one 3 credit hour course at 200 level or above (3 credits)

### VI. MAJOR REQUIREMENTS (39 CREDITS)

- ARTS 262 Introduction to Photography (3 credits)
- ARTS 298 Concepts in Artistic Process (3 credits)
- ARTD 310 Identity Systems (3 credits)
- ARTD 309 Environmental Design (3 credits)
- ARTD 400 Design Systems (3 credits)
- ARTD 308 Typography II (3 credits)
- ARTD 305 Interaction Design (3 credits)
- ARTD 306 User Experience Design (3 credits)
- ARTD 304 Motion Design (3 credits)
- ARTD 499 Special Topics in Visual Communication Design (3 credits)
- ARTD 397 Visual Communication Design Exhibition (3 credits)
- ARTD 497 The Designer as a Professional (3 credits)
- ARTD course (3 credits):

Choose one 3 credit hour course from the following:

- Graphic Design Internship (3 credits)
  - Pre-Professional Studio (3 credits)
- ARTS/ARTD/ARTH Short-term Study Abroad (3 credits)
- VI. ELECTIVES (0-4 Credits)

# PROGRAM REQUIREMENT

In addition to completing the required coursework associated with the Bachelor of Fine Arts degree offered within the Department of Visual Arts, students are required to complete six (6) approved Creativity and Development Workshops (CDW).

The Department of Visual Arts carefully crafts a calendar of CDW workshops for our Visual Arts majors. This calendar is available for viewing on the department's website and is published twice a year; one for fall and the second for spring. DoVA's Creativity and Development Workshops are designed to assist students in developing a variety of skill sets outside of the typical classroom environment. Bachelor of Fine Arts majors in the Visual Arts department will be required to complete six (6) approved workshops from the following categories: (1) Visiting Artist Lecture Series, (2) Experiential Learning in the Arts, (3) Arts & Business (4) Arts and the Institution, or (5) Arts and Survival.

All five categories must be represented in the student's cumulative workshop requirement.

# Categories Defined:

1) *Visiting Artist Lecture Series:* Eight times a year the Rebecca Randall Bryan Gallery invites their exhibiting artists to discuss the exhibition in a public forum. The public and students will have the opportunity listen, discuss, and directly question the artist about their work.

2) *Experiential Learning in the Arts*: Students will have the opportunity to complete a variety of experiential learning workshops related to both design and studio art. These workshops may include, but are not limited to internally approved design competitions, environmental art workshops, but are not limited to internally approved design competitions, environmental art workshops, letterpress workshops, etc.

3) *Arts and Business:* The greatest fear for students in art and design is life after academia. This series of workshops will address how to be successful in a post-school life. Workshops will include, but are not limited to topics related to resume building, exhibition and grant proposals, careers in design and art, etc.

4) *Arts and the Institution:* Workshops in this category will address a variety of topics. Typically the institution includes academia (preparation for graduate school, etc.), however we are approaching the idea of the institution from a broader perspective. These workshops will include topics such as legal issues in art and design, social engagement, and curation for galleries and/or museums.

5) *Arts and Survival:* Survival in the world of art and design is always a topic that should be discussed. This series of workshops will address the necessity of adaptation and evolution in a person's career and process. Workshops will include topics such as the evolving world of art and design, the importance of social communication and promotion as a designer or artist, and how not to burn your career down in a blaze of glory.

In addition to the CDW activities the university and community offer a variety of cultural experiences. These activities can be found in the university Cultural Arts Calendar, as well as at the Art Museum in Myrtle Beach. Published along with the list of workshops will be departmentally approved cultural events that will count towards the six (6) required activities.

All completed and approved CDW activities, or workshops, will be posted to the students' program evaluation. It is the responsibility of each student to not only maintain their CDW activity record, but ensure that they are fulfilled before graduation. Students must provide the appropriate identification, or school ID, for each event that is attended in order to receive credit. There will be some cases in which students will be required to complete a form, available on the department's webpage, or reflection in order to obtain credit for the attendance of an event. The Department of Visual Arts will track the participation of the Creativity and Development Workshops, but it is the student's responsibility to ensure they are completed. If an activity is not recorded properly it is the responsibility of the student to bring this to the attention of the department in a timely manner. This appeal must be completed by the end of the semester in which the activity in question took place.

# FINAL RESPONSIBILITY FOR SATISFYING DEGREE REQUIREMENTS, AS OUTLINED IN THE UNIVERSITY CATALOG, RESTS WITH THE STUDENT.

4. Motion: Proposal for a new undergraduate program – Engineering Science Minor

# **Engineering Science Minor** (Form D – ID# 2543)

The Engineering Science Minor offers students the opportunity to learn and practice engineering design on the very first day of class. Students complete course work side by side with Engineering Science majors, creating opportunities for interdisciplinary teamwork around identifying and solving 21st century engineering grand challenges. The minor program culminates in a two-course minor capstone sequence; ENGR 199: Cohort Grand Challenge I and ENGR 299: Cohort Grand Challenge II. Finally, students must complete a one-credit selective experiential opportunity such as an internship, a research project or other approved professional enhancement activity. Complete overlap between major and minor courses and a focus on design, offers flexibility to students who wish to experiment with becoming an Engineering Science major.

# Objectives of the Minor:

Upon completion of the Engineering Science Minor students will be able to:

- Collaborate on engineering teams to identify, formulate and solve complex engineering problems
- Communicate through the interpretation and creation of engineering drawings
- Employ the engineering design approach to solving real problems and communicate solutions to a range of audiences
- Examine public health, safety, welfare, global, cultural, social, environmental and economic factors in proposing engineering solutions
- Describe and identify the ethical and professional responsibilities of engineers in society

**Requirements:** 

('C' or better in the required courses for them to count toward minor completion)

# **Program Requirements (18 credits):**

Foundation Requirement (3 credits):

Complete the following:

• ENGR 101 - Inquiring Minds Want to Design: An Introduction to Engineering (3 credits)

Minor Requirements (14 credits):

- ENGR 102 Engineering Graphics Communication (3 credits)
- ENGR 201 Engineering Problem Solving (3 credits)
- PHYS 250 Communication in STEM (3 credits)
- ENGR 203 Engineering Professionalism and Pathways (3 credits)
- ENGR 199 Cohort Grand Challenge I (1 credit)
- ENGR 299 Cohort Grand Challenge II (1 credit)

# Professional Enhancement Elective (1 credit):

Complete 1 credit of any one of the following:

- ENGR 397 Independent Research (1 credit)
- ENGR 495 Engineering Internship (1 credit) Or with department approval:
- CCU Education Abroad
- CCU International Internship
- Co-operative Education
- Service Learning
- Graduate course
- Professional certification
- Professional course

# **Total Credits Required: 18 credits**

5. Motion: Proposal for change(s) in an undergraduate program – Engineering Science, B.S.

# Engineering Science, B.S. (Form B – ID# 2490)

### **Mission Statement**

The mission of the Engineering Science program is to train problem solvers who can integrate science and engineering principles. Engineering science is the study of the combined disciplines of engineering, the applied sciences, and mathematics. This combination of disciplines results in graduates that can bring a deep understanding of science and broad training in engineering design and practice together to solve new challenges. The focus of the program is on general problem solving combined with fundamental scientific and engineering skills and content knowledge, resulting in graduates having the ability to keep pace with the continuous innovations occurring with technology, and the multidisciplinary approach required for many emerging technical challenges. The program's faculty is committed to providing meaningful undergraduate experiences for both majors and non-majors through high-quality, student-centered teaching and undergraduate research/design mentoring. Students completing a degree in Engineering Science should be well prepared for either a general engineering career or graduate school in engineering, applied science, or a related discipline.

### **Student Learning Outcomes**

After completing the program in Engineering Science, students will demonstrate:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

3. an ability to communicate effectively with a range of audiences

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The Engineering Science program at CCU focuses on the application of the applied sciences integrated with engineering principles to create technical solutions to problems. Through either a major or minor, students can easily merge their interest in engineering with other disciplines taught in the College of Science such as biology, chemistry, computer science, marine science, mathematics and/or physics. Engineering Science students can also pursue one of the dual degree engineering programs with either Clemson University or Horry Georgetown Technical College.

All students pursuing a major in Engineering Science complete a foundation in mathematics and basic sciences, followed by more advanced courses in engineering and applied science. The major requirements focus on the following core academic competencies: (1) problem solving and communication, (2) epistemological methodologies, (3) design practice, and (4) technical practice. Students pursuing the minor in Engineering Science complete a basic curriculum in general engineering. Students must earn a grade of C or better in all Foundation and Major Requirement courses.

The Bachelor of Science in Engineering Science Program trains future leaders who will develop and implement sustainable solutions to global challenges. It does so by employing high quality teaching and engaged learning, creative research, community outreach, entrepreneurship and innovation in engineering sciences and design.

Engineering science is a broad-based, interdisciplinary area of study that integrates scientific and mathematical concepts, and engineering principles with the arts, humanities and social sciences, to sustainably solve contemporary challenges and advance the well-being of global society. Engineering science is ideal preparation for graduates who will lead national and international multidisciplinary teams on a diverse array of engineering projects in industry as

well as through entrepreneurial endeavors. Engineering science is also an excellent background for those who wish to pursue careers in other professions such as law, education, medicine, business, politics and public service.

At Coastal Carolina University, engineering science is offered as an undergraduate engineering degree through the Gupta College of Science. The engineering science program is a four-year curriculum that includes a general education component, foundational mathematics and science and engineering courses, two-term minor capstone design experience and an area of concentration. The engineering science program currently offers a physics concentration; electrical and other concentrations are being developed. All areas of concentration include a culminating two-term major capstone design experience. Upon completing all requirements, students are awarded a Bachelor of Science (B.S.) in engineering science with their selected area of concentration.

The vision of the engineering science program is to:

- Increase participation of underrepresented and minority groups and address the persistent degree attainment gap in engineering
- Create a learning and professional environment where diversity is celebrated as seminal to program success and where all students, particularly underrepresented and minority groups, thrive and excel
- Develop future leaders who are knowledgeable and are able to apply scientific and engineering principles to impact the well-being of the global society and its environment.

# **Program Educational Objectives**

The engineering science program prepares undergraduate students for employment, entrepreneurship and/or advanced studies. The program provides students with a broad education that emphasizes excellence in the application of scientific and engineering principles to sustainably solve societal grand challenges. The program's three primary constituencies are: industry, alumni and academia.

Within 3-5 years of graduation, graduates are expected to:

- Engage in ongoing professional development activities including but not limited to graduate study, leadership training, certification and licensure
- Foster future generations of engineers through mentoring, service and outreach
- Assume leadership roles in professional and/or community life
- Be productive, responsible, healthy citizens with a global perspective.

# **Student Learning Outcomes**

After completing the program in engineering science, students will demonstrate:

- 1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science and mathematics
- 2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety and welfare, as well as global, cultural, social, environmental and economic factors
- 3. An ability to communicate effectively with a range of audiences
- 4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- 5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- 6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- 7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

# Degree Requirements (120 129 Credits)

### **Core Curriculum Requirements**

Core Curriculum (38-40 Total Credit Hours)

### **Graduation Requirements**

Graduation Requirements (3-7+ Credits) \*

### Foundation Courses (27-45 32-43 Credits) \*

Complete the following courses:

- ENGR 101 Introduction to Engineering Inquiring Minds Want to Design: An Introduction to Engineering (3 credits) \*
- ENGR 102 Engineering Graphics Communication (3 credits)
- PHYS 211 Essentials of Physics I (3 credits) AND
- PHYS 211L Essentials of Physics I Laboratory (1 credit)
- PHYS 213 Fundamentals of Physics I (3 credits) AND
- PHYS 213L Fundamentals of Physics I Laboratory (1 credit)
- PHYS 214 Fundamentals of Physics II (3 credits) AND
- PHYS 214L Fundamentals of Physics II Laboratory (1 credit)
- CHEM 111 General Chemistry I (3 credits) \* AND
- CHEM 111L General Chemistry Laboratory I (1 credit) \*
- MATH 160 Calculus I (4 credits) \*
- MATH 161 Calculus II (4 credits)
- MATH 260 Calculus III (4 credits)

- MATH 320 Elementary Differential Equations (3 credits)
- PHIL 102 Introduction to Ethics (3 credits) \*
- CSCI 135 Introduction to Programming (3 credits)

Choose one from the following: (3-4 Credits)

- MATH 174 Introduction to Discrete Mathematics (3 credits)
- MATH 242 Modeling for Scientists I (3 credits) AND
- MATH 242L Modeling for Scientists I Laboratory (1 credit)
- MATH 344 Linear Algebra (3 credits)
- STAT 201 Elementary Statistics (3 credits) \* AND
- STAT 201L Elementary Statistics Computer Laboratory (1 credit) \*

Choose one from the following (4 Credits)

- CHEM 112 General Chemistry II (3 credits) AND
- CHEM 112L General Chemistry Laboratory II (1 credit)
- MSCI 111 Introduction to Marine Science (3 credits) \* AND
- MSCI 111L The Present Day Marine Environment Laboratory (1 credit) \*
- BIOL 121 Biological Science I (3 credits) \* AND
- BIOL 121L Biological Science I Laboratory (1 credit) \*

#### Note:

\* Course credit hours only count once toward the total university graduation credit hour requirements. Click on Credit Sharing for more information.

### Major Requirements (45-50 52 Credits)

Complete the following courses:

- ENGR 199 Cohort Grand Challenge I (1 credit)
- ENGR 299 Cohort Grand Challenge II (2 credits)
- ENGR 201 Engineering Problem Solving (3 credits)
- ENGR 202 Engineering Graphics (3 credits)
- ENGR 234 Engineering Mechanics I: Statics (3 credits)
- ENGR 244 Engineering Mechanics II: Dynamics (3 credits)
- ENGR 235 Electric Circuits (3 credits)
- ENGR 302- Materials Science for Engineers (3 credits)
- ENGR 323 Engineering Thermodynamics (3 credits)
- ENGR 333 Engineering Fluid Mechanics (3 credits)
- PHYS 250 Communicating STEM (3 credits)
- PHYS 310 Mathematical Methods in Physics (3 credits)
- PHYS 351 Computational Methods in Physics (3 credits)

- PHYS 352 Experimental Methods in Physics (3 credits)
- ENGR 495 Engineering Internship (3 credits)
- ENGR 399 Q\* Integrated Science and Design (1 to 3 credits) (3 credits required) (2 credits)
- ENGR 499 Q Senior Design (3 credits) (2 credits)

# **Professional Enhancement Electives: Complete 7 credit hours or equivalent 350** working hours in any of the following (7 Credits):

- ENGR 397 Independent Research (1-7 credits)
- ENGR 495 Engineering Internship (1-7 credits)
- UNIV 495 University Internship (1-7 credits)

AND/OR any of the below, with department approval:

- CCU Education Abroad
- CCU International Internship
- Co-operative Education
- Service Learning
- Graduate Course
- Professional Certification
- Professional Course

# Select ONE Program Concentration and complete the associated three (3) required and one (1) elective courses:

# 1. Physics Concentration (12 Credits)

Complete the following required courses in the Physics Concentration (9 Credits):

- PHYS 310 Mathematical Methods in Physics (3 credits)
- PHYS 351 Computational Methods in Physics (3 credits)
- PHYS 352 Experimental Methods in Physics (3 credits)

<u>Choose four one from the following: (12-16 3 Credits):</u>

- ENGR 315 Electric Power and Renewable Energy (3 credits)
- ENGR 321 Electronics (3 credits)
- ENGR 430 Fluid Mechanics (3 credits)
- ENGR 450 Radiation Detection and Measurement (3 credits)
- PHYS 301 Analytical Mechanics (3 credits)
- PHYS 302 Electricity and Magnetism (3 credits)
- PHYS 303 Quantum Mechanics (3 credits)
- PHYS 341 Thermodynamics and Statistical Mechanics (3 credits)
- CSCI 210 Computer Organization and Programming (3 credits)
- CSCI 310 Introduction to Computer Architecture (3 credits)
- CSCI 330 Systems Analysis & Software Engineering (3 credits)

- CSCI 473 Introduction to Parallel Systems (3 credits)
- CSCI 485 Introduction to Robotics (3 credits)
- Other 300 level or above Science or Engineering courses with prior approval from the department (3-4 Credits)

Electives (0-20 0 Credits)

#### Total Credits Required: 120-129

- B. Faculty Manual Committee (moved and seconded out of committee)
- **1. Motion:** Proposal to edit the Buildings and Grounds Committee Charge



- C. Faculty Senate Executive Committee (moved and seconded out of committee)
- **1. Motion:** Proposal to edit the September 11, 2019 Faculty Senate Minutes to include the formation of the ad hoc committee on Academic Integrity.



2. Motion: Proposal to edit policy ACAD-114: Academic Director/Department Chair



3. Motion: Proposal to edit policy ACAD-115: Program Coordinator



# X. OTHER

A. Dr. Mark Mitchell, Associate Dean/CCU NCAA Faculty Athletics Representative



# XI. ANNOUNCEMENTS

### XII. GOOD OF THE ORDER

XIII. ADJOURNMENT