

CCRI CURRICULUM REVIEW COMMITTEE MEETING

April 24, 2020 2:00-4:00 PM

WebEx

AGENDA

1. CALL TO ORDER

2. ROLL CALL

3. APPROVAL OF MINUTES

4. NON ACTION/ANNOUNCEMENTS

5. ACTION/VOTING ITEMS

NON ACTION/ANNOUNCEMENTS

1. Rules of Order
2. Curriculum Review Committee Fall 2020-Spring 2021 Schedule

ACTION/VOTING ITEMS

New Program Proposal: The Administrative Management Certificate

BUSN, 31 credits

Originator: Cheryl Amantea

RATIONALE:

The AOT (Administrative Office Technology) curriculum has not been updated in many years even though industry requirements have changed significantly and office technologies change frequently. There also now exists a duplication of effort between office technology courses offered by the Computer Studies department. Consequently, the proposed program will include Computer Studies courses instead of AOT courses. In 2019, Professional Studies and the Business Administration Department merged to become the Business and Professional Studies Department; consequently, this proposed program includes business courses (BUSN) to create an Administrative Management Certificate.

CATALOG DESCRIPTION:

The Administrative Management Certificate is designed for students who want to advance their administrative office technology skills and will allow them to pursue more and varied employment opportunities that involve such advanced skills as decision-making, using judgment, and becoming an integral part of an organization's collaborative efforts.

New Program Proposal: Certificate in Basic Accounting Skills

BUSN, 20 credits

Originator: Cecile Roberti

RATIONALE:

The certificate program is designed to provide the student with sufficient knowledge to qualify for entry-level accounting clerk and bookkeeping positions. The certificate also provides students with sufficient knowledge to keep a simple set of accounting books and records.

The US Bureau of Labor Statistics lists over 1.5 million jobs in the category of bookkeeping, accounting and auditing clerks, with RI employment statistics for this category at 6,150 positions.

Most credits earned in this program can be applied to the Accounting Certificate and the Associate Degree program in Business Administration with a major in Accounting or General Business.

The Computerized Accounting course in this program prepares students to sit for QuickBooks certification. According to Quick Bookkeeping, an accounting and training firm, “Becoming an **Intuit® QuickBooks Certified** User (QBCU) signifies your students have the knowledge and skills to help manage the books effectively in the most prevalent bookkeeping application in small business today.”

CATALOG DESCRIPTION:

The certificate program is designed to provide the student with sufficient knowledge to qualify for entry-level accounting clerk and bookkeeping positions. The certificate also provides students with sufficient knowledge to keep a simple set of accounting books and records.

Most credits earned in this program can be applied to the Accounting Certificate and the Associate Degree program in Business Administration with a major in Accounting or General Business.

New Program Proposal: Data Analytics Certificate

CSIP, 18 credits

Originators: Michael Kelly, John Mowry

RATIONALE:

Data science is emerging as a field that is revolutionizing science and industries alike. Work across nearly all domains is becoming more data driven, affecting both the jobs that are available and the skills that are required. As more data and ways of analyzing them become available, more aspects of the economy, society, and daily life will become dependent on data. Individuals with this set of knowledge are revolutionizing a wide set of domains, and are in high demand by the public and private sector.

There are many reports that industry finds itself constrained by today’s relatively small supply of well-trained data science talent, and data scientist hiring demand has begun to increase rapidly; some projections forecast that approximately 2.7 million new data science positions will be available by 2020 (Columbus, 2017). Not only is the lack of data science talent an issue, but so too is students’ lack of understanding about what a data scientist is and what types of tasks such an individual might perform.

CATALOG DESCRIPTION:

The Certificate in Data Analytics aims to introduce the concepts, techniques, ideas, skills, theories, methods, and practice necessary for entry in the fields of Data Analytics or Data Science. Students will learn the foundational skills necessary to work in a data driven world. Statistical, data, and visualization tools will provide students with the background necessary to complete either a capstone project or an internship in the field of Data Analytics.

New Course Proposal: Introduction to Data Analytics

COMI XXXX, 3 credits

Originators: Michael Kelly, John Mowry

RATIONALE:

According to the National Academies of Sciences, Engineering, and Medicine, “Data science is emerging as a field that is revolutionizing science and industries alike. Work across nearly all domains is becoming more data driven, affecting both the jobs that are available and the skills that are required. As more data and ways of analyzing them become available, more aspects of the economy, society, and daily life will become dependent on data.”

Their recommendation is; “To prepare their graduates for this new data-driven era, academic institutions should encourage the development of a basic understanding of data science”

This course provides a fundamental first step in the development of a Data Analytics program.

CATALOG DESCRIPTION:

NEW:

This course provides an introduction to the concepts and procedures in Data Analytics. The course introduces students to the underlying skills required in the collection, manipulation, and analysis of data needed to begin the process of reporting and creating visualizations used in Data Analytics. An overview of data collection, cleansing, and manipulation of data for analysis and reporting are introduced and reviewed. Emphasis is placed on the tools used for statistical analysis and visualization such as: Excel, SQL, and Tableau. Lecture/Lab: 4 hours

New Course Proposal: Data Analytics: Tools & Visualization

COMI XXXX, 3 credits

Originators: Michael Kelly, John Mowry

RATIONALE:

According to the National Academies of Sciences, Engineering, and Medicine, “Data science is emerging as a field that is revolutionizing science and industries alike. Work across nearly all domains is becoming more data driven, affecting both the jobs that are available and the skills that are required. As more data and ways of analyzing them become available, more aspects of the economy, society, and daily life will become dependent on data.”

Their recommendation is; “To prepare their graduates for this new data-driven era, academic institutions should encourage the development of a basic understanding of data science”

This course provides the students with the manipulation, and visualization skills to apply effective analytics methodologies to data.

CATALOG DESCRIPTION:

NEW:

This course provides students with the fundamental skills required to effectively manipulate and visualize data. The course covers the topics of statistical reasoning, hypothesis testing, regression analysis, and visualization methods used in Data Analytics. Emphasis is placed on utilizing a statistical programming language. (Prerequisites: COMI-XXXX, COMI-1150) Lecture/Lab: 4 hours

New Course Proposal: Data Analytics Internship

COMI XXXX, 3 credits

Originators: Michael Kelly, John Mowry

RATIONALE:

This 150-hour practicum will provide CCRI students with an opportunity to get on-the-job experience working in a business setting alongside experienced professionals working in the areas of Data Analytics and Data Science. This course will also give participating companies an opportunity to find qualified employees for current needs and for the future.

CATALOG DESCRIPTION:

NEW:

The opportunity to implement the skills and knowledge learned in the classroom through “hands on” experience in a business setting is a critical aspect of gaining a thorough understand of how Data Analytics is utilized. To complete the course, the student is required to spend an average of 10 hours per week of field work under the guidance of industry professionals. This work experience will constitute the practicum and capstone for the program. The student will be required to produce a portfolio relating to the work experience and how it is connected to the content of this program. Students will keep a working journal during the semester to help assess the progress of their experience.

Revised Program Proposal: Dental Assisting

DENT, 39 credits

Originator: Kerri Friel

RATIONALE:

The program is staying the same. The only change to the Dental Assisting Program is the addition of 3 credits.

CATALOG DESCRIPTION:

This program is accredited by the American Dental Association Commission on Dental Accreditation, 211 E. Chicago Ave., Chicago, IL, 60611.

The primary function of the dental assistant is to assist the dentist. Students in this program attend lecture and laboratory classes and receive actual clinical experience through assignments at a variety of dental healthcare facilities.

This course of study prepares students for the certification examination given by the Dental Assisting National Board, Inc. Students who successfully complete the program are awarded a certificate by the college. Students are responsible for purchasing dental instruments and uniforms, as well as paying fees for the certification exam. Participation in the dental assisting program exposes students to infectious diseases, bloodborne pathogens and ionizing radiation.

Revised Course Proposal: Chairside Dental Assisting I

DAST 1030, 5 credits

Originator: Audra Lavoie

RATIONALE:

To increase the course credits to 5 credits to reflect the contact hours more accurately. The course was originally 4 credits.

CATALOG DESCRIPTION:

OLD:

This course introduces students to procedures and practices involved in assisting the dentist. Content includes the preparation, use and care of dental instruments and equipment; patient management; basic microbiology and infection control procedures. Lecture: 3 hours Lab: 4 hours Credits: 4

NEW:

This course introduces students to procedures and practices involved in assisting the dentist. Content includes the preparation, use and care of dental instruments and equipment; patient management; basic microbiology and infection control procedures. Lecture: 3 hours Lab: 4 hours Credits: 5

Revised Course Proposal: Dental Materials Lecture

DAST 1225, 2 credits

Originator: Tara Swift

RATIONALE:

To increase the course credits to 2 in order to reflect the contact hours more accurately. The course was originally 1 credit.

CATALOG DESCRIPTION:

OLD:

This course introduces students to the materials used in dental practice, including their physical properties and uses and considerations for their selection. (Prerequisite: Enrollment in Dental Assisting Program) Lecture: 1 hour

NEW:

This course introduces students to the materials used in dental practice, including their physical properties and uses and considerations for their selection. (Prerequisite: Enrollment in Dental Assisting Program) Lecture: 2 hours Credits: 2

Revised Course Proposal: Dental Materials Laboratory for Dental Assistants

DENT 2225, 2 credits

Originator: Tara Swift

RATIONALE:

To increase the course credits to 2 in order to reflect the contact hours more accurately. The course was originally 1 credit.

CATALOG DESCRIPTION:

OLD:

Hands-on experience for the dental assisting student to develop skills in the preparation and manipulation of materials commonly used in the dental office. Lab: 4 hrs. Credit: 1

NEW:

Hands-on experience for the dental assisting student to develop skills in the preparation and manipulation of materials commonly used in the dental office. Lab: 4 hrs. Credit: 2

Revised Course Proposal: Foundations of Teaching and Learning

HMNS 2060, 3 credits

Originators: Lynn Jackson, Carol Patnaude

RATIONALE:

Four hours of observation must be added to this course in order for the course to transfer to RI College. Observation will take place in public school classrooms. CCRI students will observe classroom environment, teacher-student interaction, teaching methods, curriculum development, learning styles and standards.

CATALOG DESCRIPTION:**OLD:**

This course provides a theoretical and practical foundation for understanding the evolution and current state of American schooling. Students will examine critical issues related to classroom environment, learning styles and appropriate instruction, curriculum development, standards and diversity. Students will gain a practical understanding of those ethics and indices of professional development that correlate with effective teaching. This is a required course for teacher associates, education and special education majors. Note: Grade of C or better required for Human Services program students. Lecture: 3 hours

NEW:

This course provides a theoretical and practical foundation for understanding the evolution and current state of American schooling. Students will examine critical issues related to classroom environment, learning styles and appropriate instruction, curriculum development, standards and diversity. Students will gain a practical understanding of those ethics and indices of professional development that correlate with effective teaching. This is a required course for teacher associates, education and special education majors. Four hours of field observation are required for education majors planning to transfer. Note: Grade of C or better required for Human Services program students. Lecture: 3 hours

New Program Proposal: Certificate in Mathematics I**MATH, 19-20 credits****Originators: Steven Gambino, Jason Stockford, Soudabeh Valicenti****RATIONALE:**

Many community colleges and 4-year schools are now introducing stackable certificates as a way for students to be able to build credentials and apply them to further their career or academic goals. In many STEM fields such as Physics, Computer Science or Engineering, competency in Mathematics is crucial. Students already take many math courses in order to complete these academic programs. Allowing students to complete a Mathematics certificate while simultaneously working towards program completion enables them to build credentials and skills to utilize in their careers or in their future education. In addition, the stackable certificate in Mathematics allows students to complete a certificate in Mathematics in one calendar year (Fall semester, Spring semester, and Summer sessions) if that is what they seek to do. Students do not need to be enrolled in a degree program to take courses which lead to a certificate in Mathematics.

CATALOG DESCRIPTION:

Students can earn a certificate in Mathematics by completing a minimum of 19 credits in Mathematics which must include: MATH 1139, MATH 1200, MATH 1240, MATH 2110, MATH 2111 and MATH 2141 (OR MATH 2131). Students earning a certificate in Mathematics are encouraged to explore other electives in mathematics to broaden their abilities and credentials. This certificate is recommended for students who have an interest in eventually going into STEM fields such as Physics, Computer Science or Engineering, or students pursuing a career where mathematical thinking and abilities are essential. Due to minimum enrollment requirements students may need to take MATH 2111 and MATH 2141 (2131) at either the Knight or Flanagan Campus.

Certificate Total: 20 Credits with Math 2141 OR 19 Credits with Math 2131

Math 2141 is required for students who wish to take more classes beyond Calculus and/or earn a certificate in Advanced Undergraduate Mathematics (Future Certificate)

Revised Course Proposal: Statistics for the Health and Social Sciences**MATH 1175, 3 credits**

Originators: Todd Linton, Jason Stockford

RATIONALE:

No changes to course outcomes – Course Description update only.

CATALOG DESCRIPTION:

OLD:

Statistical procedures required for the analysis of data are explored using data acquired from such fields as medicine, social work, biology, education and business and employing statistical packages as a tool. (Prerequisite: Placement in ACCUPLACER Grid 3 or MATH 0100 with a grade of C or better or MATH 1025 with a grade of C or better). Lecture: 3 hours. Formerly MATH 1475.

NEW:

Statistical procedures required for the analysis of data are explored using data acquired from a variety of sources including fields in the health and social sciences. Statistical packages may be employed as a tool. (Prerequisite: Placement in ACCUPLACER Grid 3 or MATH 0100 with a grade of C or better or MATH 1025 with a grade of C or better). Lecture: 3 hours. Formerly MATH 1475.

**Revised Course Proposal: Statistics for the Health and Social Sciences
MATH 1175C, 3 credits**

Originators: Todd Linton, Jason Stockford

RATIONALE:

No changes to course outcomes – Course Description update only.

CATALOG DESCRIPTION:

OLD:

MATH 1175C - Statistics for the Health and Social Sciences (3 Credits)

Statistical procedures required for the analysis of data are explored using data acquired from such fields as medicine, social work, biology, education and business and employing statistical packages as a tool. Note: This course is only intended for students that have completed MATH 0099 and need co-requisite support. (Prerequisite: Placement in ACCUPLACER Grid 2 or MATH 0099 with a grade of C or better. Corequisite: MATH 0275C.) Lecture: 3 hours.

NEW:

MATH 1175C – Statistics for the Health and Social Sciences (3 Credits + 2 In-House Credits)

Statistical procedures required for the analysis of data are explored using data acquired from a variety of sources including fields in the health and social sciences. Statistical packages may be employed as a tool. This course is only intended for students that have completed MATH 0099 and need co-requisite support. (Prerequisite: Placement in ACCUPLACER Grid 2 or MATH 0099 with a grade of C). Lecture: 5 hours. Formerly MATH 1475.

Revised Course Proposal: Quantitative Business Analysis I

MATH 2077, 3 credits

Originators: Robert Kilduff, Todd Linton, Jason Stockford, Soudabeh Valicenti

RATIONALE:

The modifications to this course involve the removal of determinants and the introduction of systems of linear inequalities. Those responsible for this proposition feel that while determinants are a valuable tool for solving linear systems, students already have many methods they can use (e.g. graphing methods, substitution,

elimination, row-reduction with Gauss elimination and the method of inverse matrices). By removing determinants we have a wider range of textbooks that we can choose from (many texts in this subject do not include material on determinants) and we can add material on systems of inequalities. A working knowledge of systems of inequalities is extremely useful when students attempt to solve linear programming problems and it adds to the knowledge students already have about lines in the plane and their points of intersection.

Furthermore, we have re-ordered the material in a way so that it matches the order of presentation in many textbooks.

CATALOG DESCRIPTION:

OLD:

The purpose of this course is to develop the quantitative methods needed to solve various problems in business and economics. Topics include functions and graphs, systems of linear equations, linear programming, matrices and determinants, logarithmic and exponential functions, and the mathematics of finance.

NEW:

The purpose of this course is to develop the quantitative methods needed to solve various problems in business and economics. Topics include functions and graphs, systems of linear equations, linear programming, matrices, logarithmic and exponential functions, and the mathematics of finance.

Revised Course Proposal: Calculus I

MATH 2141, 4 credits

Originators: Todd Linton, Jason Stockford

RATIONALE:

No changes to course outcomes – Course Description update only.

CATALOG DESCRIPTION:

OLD:

Topics considered in this first course of differential and integral calculus include limits and continuity, first and higher-order derivatives with applications (including curve sketching), the differential and definite and indefinite integrals with applications (including areas and volumes). (Prerequisite: Placement in ACCUPLACER Grid 8 or MATH 2111 with a grade of C or better). Lecture: 4 hours. Formerly MATH 1910.

NEW:

This course covers topics of differential and integral calculus including limits and continuity, higher-order derivatives, curve sketching, differentials, definite and indefinite integrals (areas and volumes), and applications of derivatives and integrals. (Prerequisite: Placement in ACCUPLACER Grid 8 or MATH 2111 with a grade of C or better). Lecture: 4 hours. *Formerly MATH 1910.*

Revised Course Proposal: Advanced Engineering Mathematics

MATH 2362, 4 credits

Originators: Todd Linton, Jason Stockford

RATIONALE:

No changes to course outcomes – Course Description update only.

CATALOG DESCRIPTION:

OLD:

This course covers first-order ordinary differential equations, second-order linear differential equations, Laplace

transforms and power series solutions. A unit on applied linear algebra is also included. (Prerequisite: MATH 2243 with a grade of C or better). Lecture: 4 hours. Formerly MATH 2990.

NEW:

This course covers first-order ordinary differential equations and second-order linear differential equations. Methods for solving differential equations are studied, including the use of Laplace transforms and power series solutions. In addition to differential equations, students are introduced to matrices and linear algebra, as well as functions of a complex variable. This course transfers to URI as either Math 244 or Math 362. (Prerequisite: MATH 2243 with a grade of C or better). Lecture: 4 hours. *Formerly MATH 2990.*

Revised Program Proposal: A.S. Advanced Manufacturing and Design

ETMA, 62 credits

Originator: D. Matthew Rieger

RATIONALE:

Modern advanced manufacturing has been revolutionized by the use of computers for design, machining and automation. Today the design of almost all products and components is accomplished with the use computer-aided design (CAD) and computer-aided manufacturing (CAM) programs. The manufacturing process utilizes computer to control all aspects of subtractive and additive manufacturing (3D printing). Computer numerical control (CNC) machining is at the heart of advanced manufacturing and the production of complex components accurately and efficiently. Advanced manufacturing also uses computers to control the supply of materials, the inspection and distribution of finished products.

This program has been designed to provide the student with extensive hands-on laboratory experience in advanced manufacturing and design. Two certificates in manufacturing and design are embedded in the degree requirements.

CATALOG DESCRIPTION:

Modern advanced manufacturing has been revolutionized by the use of computers for design, machining and automation. Today almost all product and component design utilizes computer-aided design (CAD) and computer-aided manufacturing (CAM) programs. The manufacturing process uses computers to control all aspects of subtractive and additive manufacturing (3D printing). Computer numerical control (CNC) machining is at the heart of advanced manufacturing and the production of complex components accurately and efficiently. Advanced manufacturing also uses computers to control materials, inspection, quality assurance and distribution of finished products.

This program will provide students with extensive hands-on laboratory experience, and the basic skills and knowledge necessary for employment in advanced manufacturing positions. The program will cover areas of science and mathematics and their applications to machining practices and CNC programming, and places emphasis on both theoretical and practical phases of the design, cost, quality and production of machined parts.

This A.S. degree is linked to two certificates; Manufacturing and Design Cert. (CERT_ETMA_ETCI) and Advanced Manufacturing and 3D Prototyping Cert. (CERT_ETMA_ETCA). Both certificates can be applied to the AS_ETMA_ETMA degree without loss of credits. Full-time students can expect to complete this program in four semesters and one summer. The degree path requires a prerequisite of ENGL 1005 or an English placement exam and placement in ACCUPLACER Grid 3 or MATH 0101 with a grade of C or better.

Revised Program Proposal: Advanced Manufacturing and 3D Prototyping Certificate

EMTA_ETCA, 19 credits

Originator: D. Matthew Rieger

RATIONALE:

Modern manufacturing depends upon the use of computers, robots, CNC and 3D-printing technology and digital technology and Programmable Logic Controllers (PLCs). This program builds on the basic skills and knowledge developed in the Manufacturing and Design Certificate (CERT_EMMA_ETCI). The certificate will increase CNC programming skills and introduce the concepts of rapid prototyping, digital direct manufacturing and the use of 3D-laser scanning and 3D-printing. The courses will make extensive use of 3D-modeling with SolidWorks, tool control with G and M codes and MasterCam. Students will also develop a basic understanding of digital systems and the programming of PLCs. The final course is a capstone course, requiring 140 hours of an industry practicum or internship.

CATALOG DESCRIPTION:

To enroll in this certificate program, students must have successfully completed the Certificate in Manufacturing and Design (CERT_ETMA_ETCI). See [Certificate in Manufacturing and Design](#) for more information.

Today's modern manufacturing depends upon the use of computers, robots, CNC, 3D-printing technology, digital technology and Programmable Logic Controllers (PLCs). This program builds on the basic skills and knowledge developed in the Manufacturing and Design Certificate (CERT_ETMA_ETCI). The Manufacturing and Design certificate will increase CNC programming skills and introduce the concepts of rapid prototyping, digital direct manufacturing as well as the use of 3D-laser scanning and 3D-printing. The courses, required of the program, will make extensive use of 3D-modeling with SolidWorks, tool control with G and M codes and MasterCam. Students will also develop a basic understanding of digital systems and the programming of PLCs. The final course is a capstone course, requiring 140 hours of an industry practicum or internship.

The certificate can be completed in one semester and one summer session I. The combination of the two certificates, CERT_ETMA_ETCI and CERT_ETMA_ETCA, can be applied toward the Advanced Manufacturing and Design Associates' Degree without loss of credit.

Revised Program Proposal: A.S. Engineering Systems Technology**ETST, 64-65 credits****Originator: D. Matthew Rieger****RATIONALE:**

This is a revision to a program submitted and approved in 2016. The current ETST program provides for four concentration tracks, an electrical technology, a mechanical technology, an Energy Utility, and a CNC Manufacturing track. There is another manufacturing associate degree program at CCRI. This program, AS_ETMA_ETMA (AS in Advanced Manufacturing and Technology) is currently being slightly revised and renamed to AS in Advanced Manufacturing and Design.

This revised AS_ETMA_ETMA and the CNC Manufacturing concentration of the Engineering Systems Technology program: AS_ETST_ETCT, are extremely similar programs. The two programs share 52 out of AS_ETST_ETCT's 65 credits, with 10 of the 13 credits not shared by the two programs being general education courses. This redundancy in the curriculum is confusing for students and unnecessary. For this reason, the ETCT track of AS_ETST will be eliminated and AS_ETMA_ETMA will be retained as the sole manufacturing AS program. Also, the AS_ETMA program's name (AS in Advanced Manufacturing and Design) is more representative of its manufacturing and design curriculum than the AS_ETST_ETCT program's name (AS in Engineering Systems Technology, CNC Manufacturing Concentration).

The two certificates in the AS_ETST_ETCT program, CERT_ETST_ETCI and CERT_ETST_ETCA, will be migrated into the AS_ETMA program. The 50 and 3 currently students (as of spring 2020) in the ETCI and ETCA certificate programs respectively, will be able to complete them without interruption. Removing this tract of the AS_ETST program does not have a negative impact on students in the other three remaining tracks. The 30 currently active students (as of spring 2020) in the AS_ETST_ETCT program can be migrated into the AS_ETMA program with little to no loss of credit by providing general education course substitutions where necessary and appropriate.

CATALOG DESCRIPTION:

OLD:

Developing the skills and knowledge to support today's complex technology requires a shift to a systems engineering approach. Systems engineering is an interdisciplinary view of complex systems that considers customer needs, product functionality, operation, performance, testing and manufacture. This program incorporates system modeling, simulation, automation, robotics, electronics, digital systems, networking, manufacturing and electrical power. Emphasis is placed upon understanding the principles of electromechanical systems, automation, system control, machining and energy systems. Students will develop skills in creative problem solving, design principles, machine programming, computer networking and system troubleshooting. Throughout the program the student will be required to produce written reports, verbal presentations, portfolio entries, function in teams and complete a capstone project. The program is structured around a set of core technology courses and four technology concentration tracks, electrical, mechanical, energy utility and CNC manufacturing. The program will prepare students to be employed in a variety of technical support positions for electronics, electromechanical systems, automation, manufacturing, facility maintenance, emerging renewable energy technologies and the energy utility industry.

The catalog illustrated course sequence and schedule is for full time day students. Part time evening students should refer to the [Engineering and Technology](http://www.ccri.edu/engt/) website, <http://www.ccri.edu/engt/> for the recommended course sequence and scheduling.

NEW:

Developing the skills and knowledge to support today's complex technology requires a shift to a systems-engineering approach. Systems engineering is an interdisciplinary view of complex systems that considers customer needs, product functionality, operation, performance, testing and manufacture. This program incorporates system modeling, simulation, automation, robotics, electronics, digital systems, networking, and electrical power. Emphasis is placed upon understanding the principles of electromechanical systems, automation, system control, and energy systems. Students will develop skills in creative problem solving, design principles, machine programming, computer networking and system troubleshooting. Throughout the program the student will be required to produce written reports, verbal presentations, portfolio entries, function in teams and complete a capstone project. The program is structured around a set of core technology courses and three technology concentration tracks, electrical, mechanical, and energy utility. The program will prepare students to be employed in a variety of technical support positions for electronics, electromechanical systems, automation, facility maintenance, emerging renewable energy technologies and the energy utility industry.

Revised Course Proposal: University Physics I

PHYS 1100, 3 credits

Originator: D. Matthew Rieger

RATIONALE:

Currently, PHYS 1100: Engineering Physics is the combined lecture and lab. We want to rename PHYS 1100 to University Physics I Lecture and also separate the lab and name it PHYS 1150: University Physics I Laboratory, which a separate course proposal has been submitted for. Renaming the course more accurately conveys the material taught in the course (calculus-based physics) and separating the lab brings the course structure more in line with URI's offerings.

CATALOG DESCRIPTION:

OLD:

PHYS 1100: Engineering Physics (4 credits)

This course is a study of the basic equations of mechanics, heat and thermodynamics. Note: It is usually taken by engineering students in the second semester of the first year. (Pre- or corequisite: Enrollment in MATH 2141 or equivalent or permission of instructor) Lecture: 4 hours, Lab: 3 hours - Lab Fee: \$20

NEW:

PHYS 1100: University Physics I (3 credits)

This course introduces Newtonian mechanics; including kinematics and dynamics of a particle, rotation of rigid bodies, oscillatory motion, and conservation principles. (Pre- or corequisite: MATH 2141) [Need passing credit in PHYS 1100 and 1150 to fulfill general education requirement.] Lecture: 3 hours

New Course Proposal: University Physics I Laboratory

PHYS 1150, 1 credit

Originator: D. Matthew Rieger

RATIONALE:

Currently, PHYS 1100: Engineering Physics is the combined lecture and lab. We want to change the name of PHYS 1100 from: Engineering Physics to: University Physics I and also separate the lab and name it PHYS 1150: University Physics I Laboratory. Renaming the course more accurately conveys the material taught in the course (calculus-based physics) and separating the lab brings the course structure more in line with URI's offerings. In addition, one hour of the three hour lab of this course is being designated as a recitation hour, which is required for physics courses and is in line with URI's structuring of the course.

CATALOG DESCRIPTION:

NEW:

PHYS 1150 – University Physics I Laboratory (1 credit)

This course includes laboratory experiments in the fields of mechanics; including kinematics and dynamics of a particle, rotation of rigid bodies, oscillatory motion, and conservation principles, which are covered in PHYS 1100. (Pre- or corequisites: PHYS 1100 and MATH 2141) [Need passing credit in PHYS 1100 and 1150 to fulfill general education requirement.] Lab: 3 hours, Recitation: 1 hour - Lab Fee: \$20 clarify that the recitation hour is within the 3-hour lab—it looks like it is an additional hour the way it is listed here (the recitation is an additional hour. Currently the course has a three hour lab and no recitation. The recitation is being added. This is the structure of the course at URI.)