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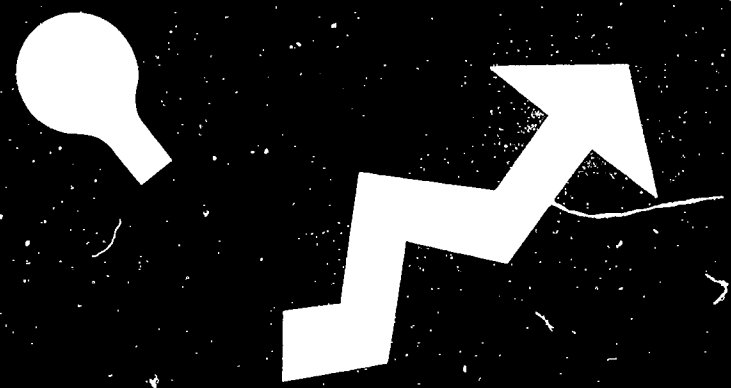
ABSTRACT

This program guide for educators outlines how the tech prep program has evolved in Rhode Island, the type of students most likely to benefit from the program, and how the program works. It begins with tech prep success stories, tech prep associate degree activity timeline, and director of Community College of Rhode Island (CCRI) Tech Prep administration/staff and participating high schools. A rationale for the program includes tech prep's history in Rhode Island. The "Introduction to the Tech Prep Associate Degree Program" addresses the following: articulation, tech prep student profile, curriculum overview, tech prep activities, application process, and suggested competency guidelines for English and mathematics at the secondary level. The final three sections focus on the three tech prep programs at CCRI: technical programs, business/office administration, and allied/dental health. Each section provides information on course selection, the participating programs at CCRI, acceptance policy, and courses of study. Appendixes include sample placement test questions for both English and mathematics, sample student agreement, and sample acceptance certificate. (YLB)

RHODE ISLAND

TECH PREP



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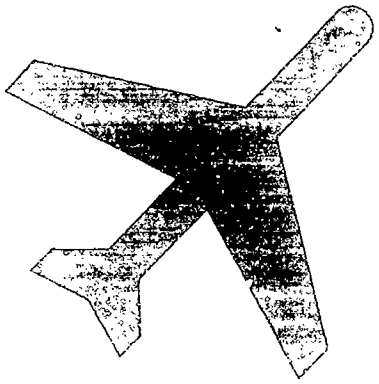

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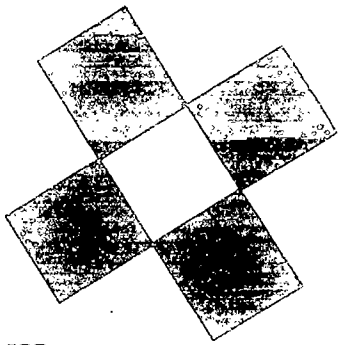
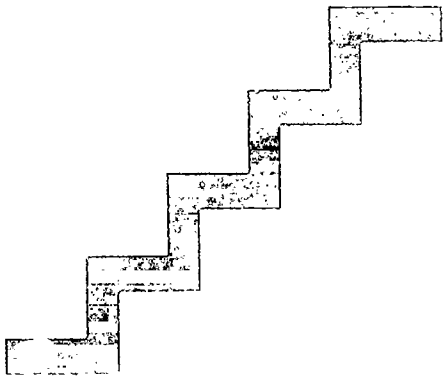


Tech Prep Associate Degree Program

Technical Programs

Business/Office Administration Programs

Allied Health/Dental Health Programs



Community College of Rhode Island

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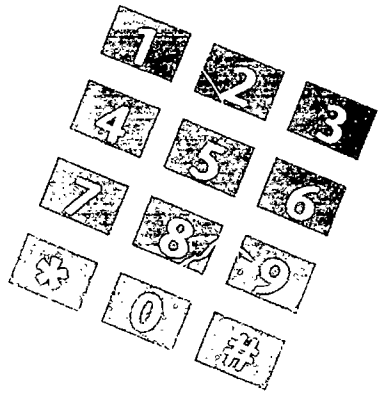
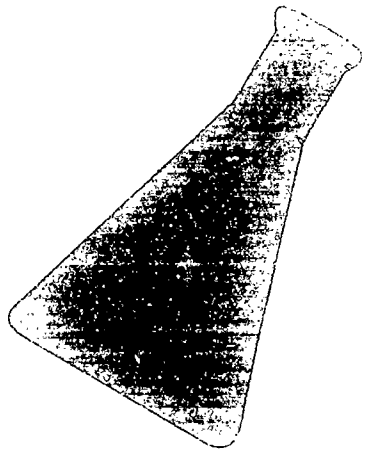




The knowledge and skills that you, as a teacher, impart to your students has limitless power. This knowledge is not stagnant; it grows and expands. It provides a foundation upon which further knowledge may be placed. **The education you offer your students is aimed at giving them every possible opportunity for success. You hope to provide them with the tools necessary to construct a promising future upon the educational foundation they have laid.** You can help students reach their potential with the Rhode Island Tech Prep Associate Degree Program. You see, preparation is what the Tech Prep Program is all about. It's aimed at preparing students for the increasingly technological, globally competitive world of work that awaits them. National education reports indicate that by the year 2000, 70 percent of the jobs in America will not require a four-year college education. However, three out of four job classifications will require an education beyond high school. There are students in your classroom who may not be achieving success for a number of reasons. Perhaps they don't understand the relevance of what they are learning in the classroom and its applications in "the real world". Or maybe they are uncertain about what they want to do for the rest of their lives and therefore merely do what it takes to graduate from high school. **Whatever the reason, these are students who possess the ability to succeed but don't utilize it. The Rhode Island Tech Prep Associate Degree Program is aimed at serving these students.** This Tech Prep Program Guide for Educators outlines how the Tech Prep Program has evolved in Rhode Island, the type of student most likely to benefit from the Program, and how the Program works. The purpose of this Program Guide is to help you help students build a future in the increasingly technological world in which we live.

Tech Prep Success Story - Michael Morsilli

Eighteen-year-old Michael Morsilli wouldn't be where he is today - enrolled at the Community College of Rhode Island - if it weren't for the Rhode Island Tech Prep Associate Degree Program. In fact, if he had continued in the college preparatory track, graduation would have been an unlikely prospect.

When Michael entered Johnston High School, he registered for college preparatory courses. These courses, he believed, would prepare him for the four-year college degree he planned to attain. By the middle of his sophomore year, however, he knew his educational plan needed revision. Although he was performing fairly well in these classes, Michael said he was not enjoying them. He felt that if he didn't understand a lesson when it was initially taught, the lesson was lost to him forever. It was then that Michael's guidance counselor encouraged him to enroll in the Tech Prep Associate Degree Program.

Michael was enrolled in the three core courses of the Program - Principles of Technology, Communications, and Mathematics for Technology - for his final two years of high school. He speaks highly of the Program and what it has helped him to achieve: "It's a smaller group in class and you feel like they're all your friends. The teachers set up the labs and then let you do them on your own. But if you can't handle it, they help you out."

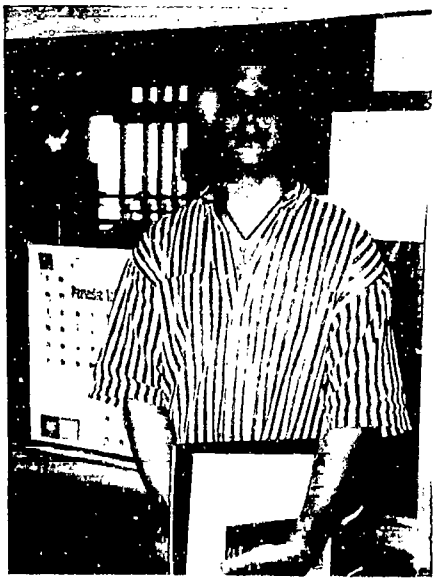
In addition, Tech Prep instructors teach the same course content that Michael was learning in his college prep courses, but in a "hands-on" manner. And if students don't grasp a particular concept, it is reviewed in class until all students understand the material.

Michael says he and other students in the Tech Prep Program, many who had been frustrated by a lack of success in other programs, were excited by their achievements in Tech Prep classes.

Michael tries to envision what his life would be like now if he had not enrolled in the Tech Prep Program: "I probably wouldn't be graduating from high school because I wouldn't have succeeded."

Michael is now such an avid advocate of the Program that he recently addressed a group of out-of-state educators who visited Johnston High School to learn more about the Program. There is a national movement to implement tech prep programs in every state, and many educators have come to Rhode Island to see the real Tech Prep success stories.

Tech Prep Success Story - Frederick J. Woodhouse III



Despite the fact that he almost failed high school, twenty-two-year-old Frederick J. Woodhouse III says that he has always enjoyed learning.

As a ninth grade student, Frederick said he failed five out of the seven courses he was taking. By the tenth grade, he spent much of his time playing football and his grades continued to drop.

In the eleventh grade, Frederick was enrolled in the Principles of Technology, the only Tech Prep course offered at his school. He said that even though he didn't really apply himself, he knew that he was good at understanding theories and concepts. With the hands-on nature of the Principles of Technology, it was encouraging to see those theories put to work.

Today, Frederick is a graduate of the Community College of Rhode Island, where he received his Associate in Applied Science Degree in Chemical Technology. And rather than worrying about whether he will fail another class, one of Frederick's major concerns these days is whether he should go to school full-time next fall and work part-time or vise versa. He has applied to both the University of Rhode Island and Rhode Island College. His plans are to double-major in Chemistry and Philosophy and then go on to earn a Master's degree or PhD. His ultimate aspiration is to become a college professor.

"Isn't that strange coming from a kid that wasn't going to graduate from high school?" Frederick asks. He says that one of the reasons he decided to continue his education was that he knew that he could; the guaranteed acceptance to technical programs at the Community College of Rhode Island was a benefit which was difficult to resist, particularly because of his academic performance in high school.

"I've always loved to learn," he says, "but I may not have shown it all the time."

Tech Prep Success Story - Jennifer Horne

When Jennifer Horne was in the tenth grade at Central Falls High School in northern Rhode Island, she felt as if she was in academic limbo. While she knew she was a bright student, her grades were not reflecting her abilities. The reason, she says, was that she wasn't really motivated in her classes. She was bored by the manner in which they were taught, she recalls. While unmotivated and "tired of school", Jennifer never seriously contemplated dropping out.

"It would have been like throwing 12 years of school down the drain, and what kind of job could I have gotten without an education?" she asks.

Then her guidance counselor told her about the Tech Prep Associate Degree Program, explaining that the Program may rekindle her interest in school, particularly in mathematics, a subject she had excelled at in the past.

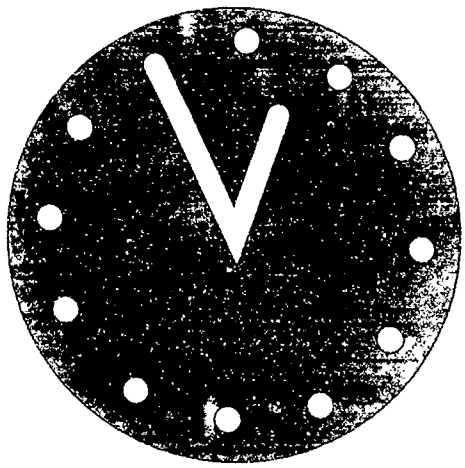
Jennifer, now entering her senior year at Central Falls, responded immediately to the applied curricula. Her grades, which had been average, rose to mostly As and Bs. Just as importantly, however, is that Jennifer's interest in school had been revived.

Jennifer has successfully completed Principles of Technology I and is excited by the prospect of continuing with Principles of Technology II in her senior year of high school. She believes the foundation she received in PT I will prepare her for the second year of the applied physics course. She realizes she is the type of student that needs to know that what she is learning is progressive, that lessons have a logical relation to later lessons rather than learning topics which are seemingly unrelated and fragmented.

In addition to successfully completing the Tech Prep Principles of Technology course, Jennifer has also successfully completed College Accounting. With her senior year upon her, Jennifer is considering what to do after high school graduation. The Community College of Rhode Island is an option she is seriously considering. As for her career path, Jennifer said she is contemplating both a technical career and a career in accounting, since both are subjects in which she excels. The choices seem to have become easier for Jennifer after enrolling in the Tech Prep Program.

TECH PREP ASSOCIATE DEGREE ACTIVITY TIMELINE

Activity	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Orientations at the High School										
Orientations at CCRI										
Senior Day-Luncheon & Placement Testing										
Career Day										
Shadowing										
Early Registration										



DIRECTORY

COMMUNITY COLLEGE OF RHODE ISLAND TECH PREP/ASSOCIATE DEGREE ADMINISTRATION/STAFF

Edward J. Liston
President

Robert A. Silvestre
Vice President, Academic Affairs

Judeth Crowley
Dean of Instruction

Joseph DiMaria
Dean of Admissions

Judith Marmaras
Program Director

Patricia Neri
Program Coordinator

Andrea MacQueen
Evaluation Technician

Cheryl Serra
Marketing Coordinator

PARTICIPATING TECH PREP ASSOCIATE DEGREE HIGH SCHOOLS:

Barrington High School
Burrillville High School
Central High School
Central Falls High School
Chariho Regional High School
Chariho Vocational Technical Facility
Coventry High School
Cranston High School East
Cranston High School West
Cranston Vocational Technical Facility
East Greenwich High School
East Providence High School
East Providence Vocational Technical Facility
Hanley Vocational Technical Facility
Johnston High School
Mt. Hope High School
Narragansett High School
Newport Vocational Technical Facility
North Kingstown High School
North Providence High School
Pilgrim High School
Tiverton High School
Toll Gate High School
Warwick Veterans Memorial High School
Warwick Vocational Technical Facility
Westerly High School
West Warwick High School
Woonsocket High School
Woonsocket Vocational Technical Facility
Davies Vocational Technical High School

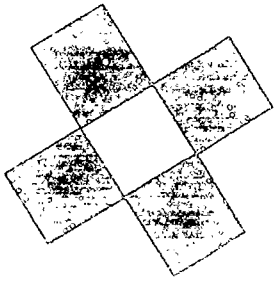
Why the Tech Prep Program?

The Rhode Island Tech Prep Associate Degree Program (TPAD) is a partnership between the Community College of Rhode Island and the majority of the secondary schools in the state. The Tech Prep Program in Rhode Island is designed to offer high school students an alternative program of study that is goal oriented, focuses on basic academic skill development in math, science and communications and prepares students to succeed in the increasingly technological world of work that awaits them. The Tech Prep Program allows students the opportunity to explore and prepare for careers in three areas: technical programs, allied dental health, and business/office administration. The Tech Prep Program is aimed at the vast majority of students who are enrolled in unfocused general education programs - programs of study that prepare them for neither work nor college.

The Tech Prep initiative responds to economic changes taking place in the United States and around the world. The globalization of commerce and industry and the introduction of the personal computer in 1975 have created the need for new work environments and a better educated, technically skilled workforce. "America's Choice: High Skills or Low Wages", a national report compiled by The Commission on the Skills of the American Workforce, has examined the changes in the world of work and proposed a new work environment that the United States must adopt in order to remain competitive in a world class economy. The study reports that

- **the economic future of our country depends on creating high performance work organizations and a highly competitive workforce,**
- **work environments will be problem oriented, flexible and organized in teams, and**
- **traditional mass production work environments will no longer be effective.**

The study also reports that more than 70% of the jobs in America by the year 2000 will not require a four-year baccalaureate degree but most will require some education and training beyond high school. The educational performance of our non-college bound students, those who will be the backbone of our economy, will determine the economic future of the United States - high skills, high wages or low skills, low wages.



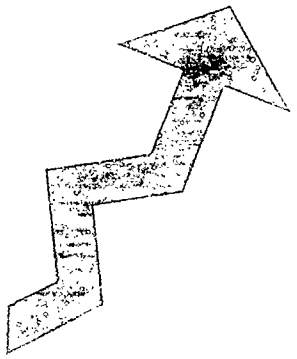
However, as demands for a more educated, highly skilled workforce increase, the dropout rate in this country remains high. Statistics show that of the approximately 44 million elementary and secondary school students in the country today, 12 million will not finish high school, and two-thirds of the dropouts will come from the unfocused general education population. Over 43 percent of the high school students in the United States today are enrolled in general education programs, nearly four times greater than the number enrolled in 1969.

In 1987, the Community College of Rhode Island, in a cooperative effort with the Rhode Island Department of Elementary and Secondary Education: Division of Vocational and Adult Education, established the Tech Prep Program with several secondary schools in the state. The Program was implemented in order to address the problem of increasing numbers of students enrolled in unfocused general education programs as well as to contribute to our country's labor needs.

Based on the book The Neglected Majority* written by Dale Parnell, former President of the American Association of Community Colleges, the Tech Prep Program provides students with a clearly defined course of study that begins by the eleventh grade and includes science (Principles of Technology), math (Mathematics for Technology/Applied Math) and English (Communications) - all taught in an applied setting. These courses provide a foundation of basic academic skills so that students will be better prepared to pursue a postsecondary technical training program. Because it is goal oriented, the Tech Prep curriculum has the potential to give the less motivated student an incentive to finish high school and eventually complete the requirements of a two-year community college degree.

*Dale Parnell, *The Neglected Majority* (The Community College Press, 1985)

In essence, the Tech Prep Program provides a realistic and attractive educational continuum which affords benefits to all involved. It allows the high schools an opportunity to offer a meaningful educational alternative to students. Students who come to the Community College of Rhode Island after completing the first two years of the Tech Prep Program in high school will be academically prepared to enter a technical, allied health/dental health or business/office administration program at the College and complete the requirements of an Associate Degree; in many instances, these are students who would have eventually enrolled at the Community College, but by enrolling without the necessary academic foundation to successfully complete college-level courses, they would have likely required remedial work. And finally, the Rhode Island Tech Prep Associate Degree Program provides employers with a better prepared pool of employees who can adapt to the ever-changing demands of a technological society.



A national movement is underway in the United States to implement Tech Prep programs in every state in order to meet the needs of a large number of undirected students as well as to positively affect the country's changing employment needs. Rhode Island is one of the few states to have a well-established, successful TPAD Program. The Rhode Island Tech Prep Associate Degree Program was cited as one of three model Tech Prep programs in the country by the American Association of Community Colleges. The US Department of Education has also awarded the Community College of Rhode Island a $312,657 grant to demonstrate this successful program.

The Community College of Rhode Island, along with local high schools, the Rhode Island Department of Elementary & Secondary Education, the Office of Higher Education, and the US Department of Education have all demonstrated commitment to and support of this model program. Participating high schools have implemented new curricula in science, math and communications that combine a "hands-on" practical approach to learning with critical academic skills. Funding provided by the Office of Higher Education and the Rhode Island Department of Elementary and Secondary Education as well as continued internal support and commitment from the administration and faculty at CCRI have contributed to the continuation, growth and success of the TPAD Program.

TECH PREP'S HISTORY IN RHODE ISLAND

In 1987, after two years of planning, the Rhode Island Tech Prep Associate Degree Program was piloted in seven high schools in the state. At that time. 105 high school students participated in the Program. During the 1992-93 academic year, 1,256 students representing 22 of the 41 comprehensive high schools and 8 of the 9 vocational/technical centers in Rhode Island were enrolled in the Program. And as the high school enrollment in the Rhode Island Tech Prep Program has increased, so too has the number of students who decided to continue in the Program by enrolling at the Community College of Rhode Island. One hundred eighty-one students were enrolled either full- or part-time for the 1992 fall semester. The progress of these students continues to be monitored throughout their involvement at the Community College.

In addition, near the conclusion of the 1993 school year, a high school senior placement survey was administered to all twelfth grade Tech Prep Program participants. The survey is an important instrument used in the tracking of students once they complete high school. Of the 518 seniors taking part in the Program, 417 students responded to the survey. Based on these responses, it has been determined that 67.9 % of the students plan to attend either a two- or four-year degree-granting institution or other program, while 13.4% plan to seek employment and 7.2% plan to enter the military.

Since 1987 the Tech Prep Program has increased the programs of study offered to students. In addition to the Tech Prep curriculum for technical programs - which consists of Principles of Technology, Mathematics for Technology, and Communications - Allied/Dental Health and Business/Office Administration were added as available programs of study in the Tech Prep Program. Allied/Dental health incorporates Applied Biology/Chemistry into the program while the Business/Office Administration program is comprised of College Business, College Accounting and Administrative Office Procedures.

Introduction to the Tech Prep Associate Degree Program

ARTICULATION

The Tech Prep Associate Degree Program is a high school/Community College partnership that provides an alternative program of study for students who are enrolled in general education or vocational programs. While there are three related, but separate career paths which students may explore in the Tech Prep Program - technical programs, allied/dental health, and business/office administration - they share many common components.

The Program begins in high school and by grade 10 or 11 students in the Tech Prep Program enroll in a focused curriculum in science, math and English - all taught in an applied setting. These courses provide students with the academic skills they will need to pursue a postsecondary training program and subsequently a career in a technical, allied/dental health, or business/office administration field.

The TPAD Program is an educational plan that

- **offers an alternative to the traditional college prep program**
- **offers students a solid academic foundation based on concrete, real-life applications**
- **coordinates the efforts of secondary and postsecondary schools to achieve maximum results in minimum time**
- **effectively addresses key differences in student needs, backgrounds, and learning styles and**
- **provides students with lifelong learning competencies.**

Because it is goal-oriented, the Tech Prep curriculum has the potential to give the less motivated student an incentive to finish high school and eventually complete the requirements for an associate degree.

The kinds of high school students likely to enroll in the TPAD Program are those who are in an unfocused general program of study and who lack career and educational goals as well as those students who are enrolled in vocational technical programs that are likely to lead to some postsecondary education and training. The program is designed for the average student in the middle two quartiles, those who fall between the fourth and seventh stanine of the Metropolitan Achievement Test scores. (Stanines are based on Metropolitan Achievement Tests administered in grade 10; the stanines rank ability on a scale of 1 to 9.) The curriculum materials are written at a ninth grade reading level.

The TPAD recruitment process at the high school level includes:

- information letters to students and parents
- orientation presentations and meetings
- student interviews and counseling sessions
- selection meetings
- parent orientations
- distribution of promotional materials (fliers, brochures)

Students are selected for the Program by guidance counselors with input from classroom teachers. Students selected for the TPAD Program are those who ultimately can meet the academic requirements of an associate degree program of study.

To assist with student recruitment, Tech Prep staff at the Community College of Rhode Island are available during the school year to conduct student and parent orientations at the high schools.

Once selected, students will receive an informational packet on Tech Prep and will be invited to visit the Community College for an introduction to the program.

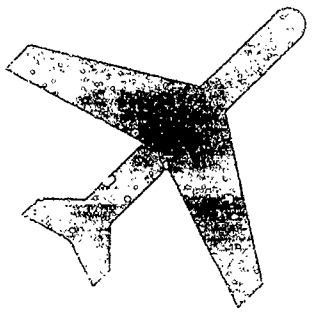
TECH PREP STUDENT PROFILE

In order to determine if a student will be well-served by the Tech Prep Program, a guidance counselor or teacher is encouraged to evaluate ninth or tenth grade students at midyear by using the following criteria:

1. **REPORT CARD - College prep students who are not succeeding and strong non-college prep students are candidates.**
2. **PORTFOLIO - Assess past performance for strengths and weaknesses.**
3. **CAREER INTEREST ASSESSMENTS - Review results to determine interests.**
4. **STANDARDIZED TESTS - MAT Scores in the 40 percentile to 60 percentile range.**

Consideration should be given to all the above areas before guiding a student in/out of the Tech Prep Program.

CURRICULUM OVERVIEW



Technical, Allied/Dental Health, Business/Office Administration

The Tech Prep curriculum at the secondary level is a core curriculum that is occupationally related and highlights goal-setting skills. The course material is practical and relevant to the world of work. Courses are also taught in cooperative learning settings and utilize a hands-on approach to learning.

The Principles of Technology I and II is an applied physics course which combines video instruction, printed materials and hands-on lab activities. Students will complete 9 to 14 units in grades 11 and 12 that are based on the application of physics principles in mechanical, fluid, electrical and thermal systems found in modern technical equipment.

Mathematics for Technology I and II (which may also be referred to as Applied/Technical Math) is based on an integrated presentation of topics in arithmetic, algebra geometry, trigonometry, probability, estimation, problem solving, and statistical process control. The 36 modules are designed to be used in two one-year courses which fully reflect the standards set by the National Council of Teachers of Mathematics. Two years of Mathematics for Technology fulfills the requirements for one year of algebra and a half-year of geometry.

Applied Communications I and II teaches communication, language arts and English skills as they apply in the workplace. It is designed to develop and refine job-related communication skills. The curriculum consists of 15 modules that can be used in any order in grades 11 and 12 (some schools may opt to begin the Program earlier).

Applied Biology/Chemistry I and II consists of 12 units that present scientific fundamentals of biology and chemistry as a unified domain and provides students with hands-on activities that relate to work and other life experiences. The units may be taught as a one- or two-year course or integrated into existing curricula.

The TPAD Program exposes students to a number of career options in technical, allied/dental health and business/office administration fields and provides them with the academic and technical skills needed to pursue those careers.

TECH PREP ACTIVITIES

Students enrolled in the Tech Prep Program are invited to participate in a number of career and educational development activities during the school year. While in high school, Tech Prep students visit the Community College of Rhode Island on several occasions. The first visit, which takes place in the fall, introduces students to the College and faculty and provides them with a general overview of all of the technical programs that are offered at CCRI. At that time, students receive information about career opportunities as technicians in a number of different fields and tour the technical labs to get a firsthand look at the various programs offered at the college.

In the spring, students return to CCRI for a full day of "hands-on" lab activities and an opportunity to meet and talk with employers from various technical industries and businesses.

High school seniors in the Tech Prep Program are provided an opportunity to shadow CCRI students who are enrolled in technical, allied/dental health, office administration or business administration programs at the College any time during the school year. A

senior luncheon is held in January and at this time students complete math and English placement tests and receive assistance with College applications, financial aid and employment opportunities.

In addition, an early registration day is scheduled for those Tech Prep students who plan to attend the Community College in the fall. Here, students receive assistance in selecting their courses and are provided with any other information they may require.

Students are regularly invited to attend a number of workshops that are held throughout the academic year. These workshops address pertinent issues for students such as study skills, time management and financial aid.

Additional programs and activities are scheduled for individual high schools upon request.

All of these activities help to increase students' awareness of the career opportunities in high technology and the educational requirements needed to successfully pursue a career in a technical, business/office administration, or allied/dental health field.

APPLICATION PROCESS

Students enrolled in the Tech Prep Program who wish to attend the Community College of Rhode Island upon graduation from high school may apply to the college any time during their senior year. They should complete an application that is stamped with "TPAD" which signifies that they are in the Tech Prep Associate Degree Program, eligible for guaranteed acceptance to specific technical programs and waiver of the application fee. Please contact the Tech Prep office for more specific information about the application process for various CCRI programs.

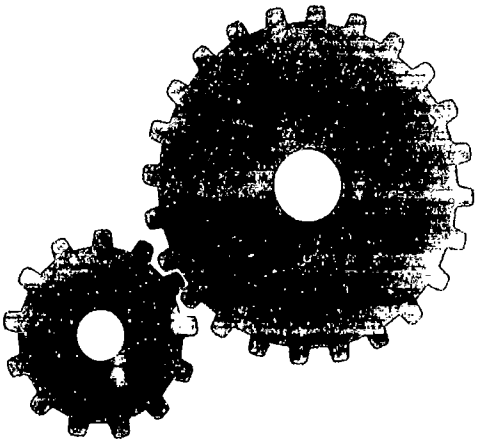
Students will be scheduled for the math and English Placement Tests and will receive notice of acceptance by mail.

SUGGESTED COMPETENCY GUIDELINES FOR ENGLISH: SECONDARY LEVEL

English 1010, Composition I, is the basic English course required by CCRI technical programs. If, after taking the English placement test, a student isn't ready for English 1010, English 1050, Fundamentals of Writing, may be taken in its place. Some technical programs may also require that students successfully complete English 1010. English 2100, Technical Report Writing, and English 1100, Oral Communications, are also required by some of the technical programs.

The following guidelines are recommended for the high school English portion of the program and a student who has the following competencies should be prepared for English 1010:

a.) Write complete sentences - no fragments and no run-ons
b.) Write organized single paragraphs
c.) Outline
d.) Write short essays
e.) Grammar: know subject, verb, adjective
f.) Punctuation: know comma, period, apostrophe, quotation, colon
g.) Critical reading
h.) Critical thinking skills
i.) Research skills
j.) Study skills



SUGGESTED COMPETENCY GUIDELINES FOR MATH: SECONDARY LEVEL

The following guidelines are recommended for the high school mathematics portion of the program:

1. Students should begin studying math in the 9th grade and take at least one math course each year through grade 12;

2. By the end of the 12th grade students should be proficient in elementary algebra. Students who are proficient at the intermediate algebra level will be able to choose one of the more advanced technical programs;

3. The students should have the following skills in arithmetic:
   - a.) A working knowledge of addition, subtraction, multiplication, division and number concepts
   - b.) ability to add, subtract, multiply, and divide whole numbers, fractions and decimals
   - c.) find the least common and the greatest common factor
   - d.) convert fractions to decimals and decimals to fractions
   - e.) convert fractions to decimals and percents and reverse the process
   - f.) find the rate, base, and percentage
   - g.) solve ratio and proportion problems
   - h.) find rate of increase and rate of decrease
   - i.) solve numerical geometric and trigonometric problems
   - j.) understand the concept of exponents and be able to raise a number to any power
   - k.) solve arithmetic word problems
   - l.) round decimals to the required number of places
   - m.) use the metric system of measurement
   - n.) use approximations to determine if an answer is reasonable

4. Tech Prep students should have the following geometric skills;
   - a.) Understand and use the following properties
     - a circle-radius, diameter, circumference, area
     - a rectangle-length, width, perimeter, and area
     - a triangle-side, length, altitude, perimeter, angular measurements, and area
     - a right triangle-pythagorean theorem
     - a rectangular solid-length, width, height, area of the sides, and volume
     - a cylindrical solid-radius, diameter, circumference, area for surfaces, and volume
     - a triangular solid (prism)-length, triangular side lengths, triangular altitudes, triangular-angles, area of plane surfaces, and volume
   - b.) Each of these figures should be looked at in a real-life situation
   - c.) The students should understand how to construct and interpret graphs, such as circle, bar, and line graphs

5. Students being considered for enrollment in the TPAD Program should have the following algebraic skills:
   - a.) add, subtract, multiply and divide signed numbers
   - b.) solve linear equations (non-fractional, fractional, decimal, forms with and without parenthesis)
   - c.) simplify algebraic expressions
   - d.) factoring; students should be able to find common factors, special products, trinomials
   - e.) solve quadratic equations - factoring, completing the square formula
   - f.) graph linear and quadratic functions on the x-y coordinate plane
   - g.) given an algebraic formula, a student should be able to solve for a specific letter
   - h.) solve algebraic word problems
   - i.) solve two simultaneous linear equations
   - j.) properties of exponents and radicals

TECHNICAL PROGRAMS

COURSE SELECTION

Students enrolling in the TPAD Technical Program take the Principles of Technology (applied physics), English with an applied Communications component and Mathematics for Technology I and II. Selection of math courses may vary according to a student's math skills and career goals, and Mathematics for Technology may be offered in grades 10 and 11 rather than 11 and 12. Mathematics for Technology I and II provides students with the minimal math requirements needed for most of the technical programs at CCRI. Some of the technical programs at CCRI, however, require advanced math skills for acceptance. (See curriculum outlines for specific program requirements.)

PARTICIPATING TECHNICAL PROGRAMS AT CCRI

The Tech Prep Technical Program curriculum at the secondary level prepares students for the following technical programs at CCRI as well as any of the 22 Associate Degree Programs offered at the College:

Chemical Technology
Computer Science
Electronics
Engineering
Engineering Technology (Computer Engineering Technology, Electronic Engineering Technology, Mechanical Engineering Technology)
Instrumentation
Machine Design
Machine Process

ACCEPTANCE POLICY - TECHNICAL PROGRAMS

Students who successfully complete the high school portion of the Tech Prep Program are guaranteed acceptance into specific technical programs at the Community College of Rhode Island.

Criteria for guaranteed acceptance are:

(1) a C or better in the Principles of Technology I and II
(2) a C or better in English, grade 11 and 12
(3) a C or better in a math program that meets the requirements of the specific technical program that the student is applying to: for most of the technical programs, a C or better in Mathematics for Technology I and II, Elementary Algebra Part I and II, or Algebra I meet the requirements for guaranteed acceptance; however, the Computer Science Program requires that students maintain a B or better in Algebra I, Engineering requires that students complete a minimum of two years of Algebra or equivalent, and Electronic Engineering Technology and Mechanical Engineering Technology require that students complete Algebra and Geometry or the equivalent.
(4) proficiency on the English and Math Placement Tests (see appendix)

Students who successfully complete the high school portion of the TPAD Program will receive a certificate of completion from the Community College of Rhode Island.

Students who do not meet the criteria for guaranteed acceptance will be accepted to the College and will be able to complete their chosen program of study once they have met the academic criteria.

TECH PREP CURRICULUM FOR TECHNICAL PROGRAMS - SECONDARY LEVEL

GRADE 11
Principles of Technology I*
English/Applied Communications
Math (Applied Math I, Applied Math II, Elem. Algebra Part I, Algebra I)
Physical education
Other required coursework
Electives

GRADE 12
Principals of Technology II*
English/Applied Communications
Math (Applied Math II, Elementary Algebra Part II, Algebra II, Geometry)
Physical education
Other required coursework
Electives

** It is recommended that high schools use the Principles of Technology (Units 1 - 14) for the Applied Physics portion of the Program in grades 11 and 12. Students should complete a minimum of 9 units by the end of grade 12.*

These curriculum guidelines were determined by a curriculum committee made up of high school and Community College faculty.

Associate Degree Courses of Study
Technical Programs

Keep in mind that courses of study may change. Please refer to the most recent course catalog for current information.

CHEMICAL TECHNOLOGY
COLLEGE COURSE OF STUDY

FIRST YEAR

First semester
Algebra for Technology
General Biology - Zoology
Chemical Technology I
Elective - Liberal Arts or social sciences

Second semester
Trigonometry for Technology
Modern Technical Physics I
Chemical Technology II
Composition I

SECOND YEAR

First semester
Chemical Technology III
Modern Technical Physics II
Intro. to Computers

Second semester
Chemical Technology IV
General Microbiology
Elective - Liberal Arts

JOB TITLES: chemical research technician, laboratory assistant, chemical production technician, junior chemist, analytical technician, sales representative, electronics

Students' math selection in high school should prepare them to take Algebra for Technology at the Community College level and to successfully complete the math placement test that is administered at the end of their senior year.

Students who successfully complete this program will receive an Associate Degree in Applied Science.

CHEMICAL TECHNOLOGY

DEFINITION: The Ch mical Technology Program places an emphasis on laboratory applications and techniques and aims to develop students' fundamental understanding of general, organic and analytical chemistry. This Program provides students with a core of chemical information which places more emphasis on practical applications than on theory.

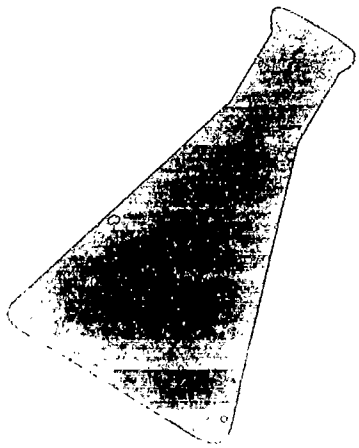
CAREER OPTIONS: This two-year Program prepares students to enter the chemical field in any one of a variety of capacities including chemical research technician, laboratory assistant, chemical production technician, junior chemist or analytical technician.

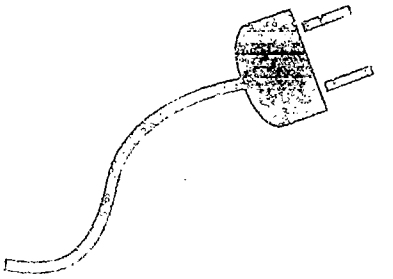
Chemical technologists work with chemists and chemical engineers developing and using chemicals and related products and equipment. Most do research and development, testing, or other laboratory work. They set up and conduct tests and experiments, measure reactions, and collect and analyze data. Some chemical technicians collect and analyze samples of air and water to monitor pollution levels.

QUALIFICATIONS: strong interest in chemical processes and in science, ability to work at repetitive tasks toward a desired end result, ability to work independently and with others, mechanical aptitude and manual dexterity, good health, eyesight and color perception

EMPLOYERS: Hoechst Celanese, Corp., Philip Hunt, Pfizer, Inc., Davol, Polaroid, IBM, Eastern Color & Chemical Co., and Wel Gen Manufacturing.

TECH PREP HIGH SCHOOL REQUIREMENTS: Technical Math I and II or equivalent, Principles of Technology, Communications.





ELECTRONICS

DEFINITION: Students in the Electronics Program study electronic components used in today's society. Students also learn how to calibrate and maintain a system. Emphasis is placed on semiconductor usage. The Electronics Program includes four courses related to computer hardware.

CAREER OPTIONS: Students who complete the Electronics Program at CCRI may seek employment in areas of maintaining and repairing electronic equipment, repairing computers, research and development, field service representative in communications fields.

Electronics technicians develop, manufacture and service a wide range of electronic equipment and systems. They assist engineers in the design and fabrication of experimental models of electronic equipment, set up and repair electronic equipment and systems for consumers, perform inspection and assembly of complex electronic equipment, work with radar, radio, sonar, television, control instrumentation, communication equipment, navigation equipment, electronic computers, data processing equipment and specialize in one or several of these items. Electronics technicians can engage in sales activities of electronic products, work in research laboratories, test laboratories production prototype fabrication and assembly areas, as well as in design and engineering offices.

QUALIFICATIONS: good color perception, manual dexterity, good eye-hand coordination, patience, attention to detail and ability to work alone

EMPLOYERS: IBM, Digital Equipment, Honeywell, Codex, Raytheon, G.T.E. Transcom, G Tech, American Power Conversion, and Telecom Technology.

TECH PREP HIGH SCHOOL REQUIREMENTS: College Algebra or equivalent (Technical Math I, II), Principles of Technology, Communications

ELECTRONICS
COLLEGE COURSE OF STUDY

FIRST YEAR

First semester
Electrical Fundamentals Lab
Technical Report Writing
Algebra for Technology
Technical Physics
Electrical Fundamentals
Digital Concepts

Second Semester
Trigonometry for Technology
Electrical Circuits
Semiconductor Devices
Measurements for Electronics
Social Science Elective

SECOND YEAR

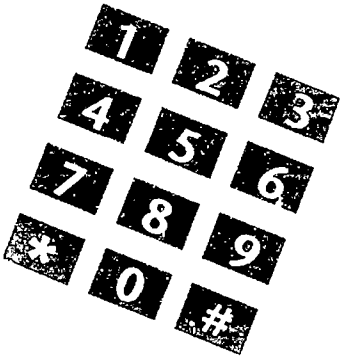
First semester
Computer Applications
Communications
Analog Circuits
Nonlinear Circuits
Elective

Second semester
Microprocessors
Technical Project and Seminar
Special Topics
Elective

JOB TITLES: electronic technician, electronic systems installer/repairer, developmental electronics assembler, computer repair technician

Students' math selection in high school should prepare them to take Algebra for Technology at the Community College level and to successfully complete the math placement test administered at the end of their senior year.

Students who successfully complete this program will receive an Associate Degree in Applied Science



ENGINEERING

DEFINITION: The Engineering Program at CCRI teaches students abstract designing using design principles and mathematical formulas to solve problems. The Program requires a strong foundation in math, basic sciences and engineering fundamentals as well as liberal arts courses.

CAREER OPTIONS: This program is designed to allow students to transfer courses to a four-year Engineering Degree Program or to obtain employment as an engineering associate or technician.

Engineering technicians use the principles and theories of science, engineering, and mathematics to solve problems in research and development, manufacturing, sales, and customer service. Their jobs are more limited in scope and more practically oriented than those of scientists and engineers. Many engineering technicians assist engineers and scientists, especially in research and development. Some technicians work on their own, servicing equipment at customers worksites. Others work in production or inspection jobs.

QUALIFICATIONS: strong interest in and aptitude for math and science, creativity, ability to work with others

EMPLOYERS: Andon Electronics Corp, BASF Bio Research Corp, Brown & Sharpe, Kenyon Industries, Texas Instruments.

TECH PREP HIGH SCHOOL QUALIFICATIONS: Two units of Algebra or equivalent, Principles of Technology, Communications

ENGINEERING
COLLEGE COURSE OF STUDY

FIRST YEAR

First semester
Composition I
Pre-Calculus Math*
Engineering Graphics
Intro. to Engineering and Technology
General Chemistry I**

Second semester
Liberal Arts elective
General Elective
Calculus I
Engineering Physics
Scientific Programming

SECOND YEAR

First semester
Calculus II
Intro. to Electrical Engineering
Intro. to Electrical Engineering lab
Engineering Mechanics Statics
Liberal Arts Elective
Physical Science Elective

Second semester
Calculus III
Linear Electrical Systems & Circuit Theory***
Linear Circuits Lab*** (optional)
Mechanics of Materials for Engineering***
Mechanical Engineering Lab (optional)***
2 Liberal Arts Electives
Engineering Mechanics-Dynamics

** Students who register for MATH 1900, pre-calculus math, are required to take a math placement test prior to the beginning of the summer session.*

*** Students who do not pass the chemistry placement test must take CHEM 1020 before taking CHEM 1030, which is a requirement for graduation. Others would normally take CHEM 1030 the first semester.*

**** Any student who wishes to study chemical engineering can replace either the electrical engineering courses or the mechanical engineering courses with CHEM 2230 or CHEM 2270.*

JOB TITLES: design engineer, applicotions engineer, project engineer

A minimum of two years of algebra or the equivalent is required for admission into the engineering program.

Students who successfully complete this progrom will receive on Associate in Science Degree.

COMPUTER ENGINEERING TECHNOLOGY
COLLEGE COURSE OF STUDY

FIRST YEAR

First semester
Technical Math I
Composition I
Programming in BASIC
Fund. of Electricity & Electronics I
Intro. to Engineering & Technology
Engineering Applications of Computers

Second semester
Technical Math II
Fiber Optic Communications
Graphics for Electronics
Electronic Devices & Circuits I
Fund. of Electricity & Electronics II
Liberal Arts Elective

SECOND YEAR

First semester
Physics for Technology I
Data Base Design & Maintenance
Electronic Measurement & Instruments
Digital Electronics
Electronic Devices & Circuits II
Liberal Arts Elective

Second semester
Operating Systems
Scientific Programming
Technical Project
Microprocessors & Microcomputers
Liberal Arts Elective
Electronic Communications II

JOB TITLES: computer engineering technician, design technician

A minimum of two years of Algebra and one year of Geometry or equivalent is required for acceptance into the program.

Students who successfully complete this program will receive an Associate in Science Degree.

ELECTRONIC ENGINEERING TECHNOLOGY
MECHANICAL ENGINEERING TECHNOLOGY

DEFINITION: Technicians support the engineer directly as co-workers in design, construction, and testing of engineering models and systems. They also install and maintain electronic equipment. They indirectly act as liaison for an engineering team in production, sales, distribution and maintenance of systems and equipment.

CAREER OPTIONS: Engineering technicians use the principles and theories of science, engineering and mathematics to solve problems in research and development, manufacturing, sales, and customer service. Their jobs are more limited in scope and more practically oriented than those of scientists and engineers. Many engineering technicians assist engineers and scientists, especially in research and development. Some technicians work on their own, servicing equipment at customers' worksites. Others work in production or inspection jobs. Electrical and electronics technicians develop, manufacture, and service equipment and systems such as radios, radar, sonar, television, industrial and medical measuring of control devices, navigational equipment, and computers, often using measuring and diagnostic devices to test, adjust, and repair equipment. Mechanical engineering technicians work with engineers in design and development by making sketches and rough layouts of proposed machinery and other equipment and parts. They record data, make computations, plot graphs and analyze results, and write reports when planning and testing experimental machines. When planning production, mechanical engineering technicians prepare layouts and drawings of the assembly process and of parts to be manufactured. They estimate labor costs, equipment life, and plant space.

QUALIFICATIONS: science and math aptitude, creativity, ability to work with others

EMPLOYERS: Cherry Semiconductor, UNISYS Corp.

TECH PREP HIGH SCHOOL REQUIREMENTS: Algebra or equivalent, Principles of Technology, Communications

ELECTRONIC ENGINEERING TECHNOLOGY
COLLEGE COURSE OF STUDY

FIRST YEAR

First semester
Composition I
Technical Math I
Engineering Applications of Computers
Programming in BASIC
Fund. of Electricity & Electronics I
Intro. to Engineering & Technology

Second semester
Technical Math II
Fiber Optic Communications
Liberal Arts Elective
Graphics for Electronics
Electronic Devices and Circuits I
Fundamentals of Electricity and Electronics II

SECOND YEAR

First semester
Physics for Technology I
Liberal Arts Elective
Electronic Devices and Circuits II
Electronic Measurement and Instruments
Electronic Communications I
Digital Electronics

Second semester
Liberal Arts Elective
Electronic Communications II
Electronic Communications Lab
Technical Project
Industrial Electronics
Microprocessor & Microcomputers

JOB TITLES: engineering technician, testing technician, design technician

A minimum of two years of algebra and one year of geometry or equivalent is required for acceptance into the program.

Students who successfully complete this program will receive an Associate in Science Degree.

MECHANICAL ENGINEERING TECHNOLOGY
COLLEGE COURSE OF STUDY

FIRST YEAR

First semester
Technical Math I
Composition I
Physics for Tech. I
Engineering Graphics
Intro. to Robotics
Intro. to Engineering and Technology

Second semester
Technical Math II
Programming in BASIC
Design Drafting
Manufacturing Processes
Statics & Strength of Materials
Engineering Applications of Computers
Cost Estimating

SECOND YEAR

First semester
2 Liberal Arts Electives
Statistics & Quality Control
Basic Mechanisms
Basic Tool Design

Second semester
Principles of Production Management
Industrial Materials
Elements of Machine Design
Fund. of Control Electronics
Liberal Arts Elective

NOTE for Mechanical, Electrical and Computer Engineering Technology at CCRI: A minimum of two years of algebra and one year of geometry or equivalent is required for acceptance into the program.

JOB TITLES: mechanical engineering technician, design technician

A minimum of two years of algebra and one year of geometry or equivalent is required for acceptance into the program.

Students who successfully complete this program will receive an Associate in Science degree

INSTRUMENTATION TECHNOLOGY

DEFINITION: Students enrolled in the Instrumentation Technology Program are trained to install, maintain, repair and calibrate instruments used in the production of products. They study the instruments used in process control which can be mechanically controlled (hydraulic or pneumatic), or electronically controlled by computer or analog controller. Students will examine the process utilized in changing the raw product to the finished product. Example: production of paper, chemicals, beer, film, etc.

CAREER OPTIONS: An instrument technician services instruments which are used to measure, record, analyze and control product output and processes in research and industry. They overhaul and service instruments used to measure hydraulic pressure, fluid flow, temperature, level, and many other process variables. They inspect faulty instruments and diagnose malfunctions using manufacturers' manuals, by disassembly and visual inspection of special test jigs, chambers and other apparatus designed especially for certain types of instruments. They reassemble, test and calibrate using high standard instruments to ensure accuracy and minimal instrument error. They install special laboratory test equipment and calibrate to manufacturers' specifications.

QUALIFICATIONS: good manual dexterity and eye hand coordination, good vision and color perception, patience and ability to work alone and with others

EMPLOYERS: Honeywell, Davol, Narragansett Electric, Hoechst Celanese, Corp., Polaroid, Electric Boat, Foxboro Company, Toray Plastics, Gulton and New England Power.

TECH PREP HIGH SCHOOL REQUIREMENTS: Principles of Technology, Mathematics for Technology I and II, Communications

INSTRUMENTATION
COLLEGE COURSE OF STUDY

FIRST YEAR

First semester
Algebra for Technology
Technical Report Writing
Instrumentation I
Electrical Fundamentals
Digital Concepts

Second semester
Trigonometry for Technology
Technical Physics
Instrumentation II
Electrical Circuits
Semiconductor Devices

SECOND YEAR

First Semester
Computer Applications
Control Principals and Telemetry
Fundamentals of Electronic Circuits
Social Science Elective

Second semester
Technical Project and Seminar
Electronics for Instrumentation
Electives

JOB TITLES: instrumentation technician, product development technician, assistant control specialist, instrument repairer

Students' math selection should prepare them to take Algebra for Technology at the Community College level and to successfully complete the math placement test that is administered at the end of their senior year.

Students who successfully complete this program will receive an Associate Degree in Applied Science.

MACHINE DESIGN
COLLEGE COURSE OF STUDY

FIRST YEAR

First semester
Composition I or English 1050
Algebra for Technology
Pictorial Drawing
Multiview Projection
Auxiliary Views, Intersections and Development
Machine Tool Processes I
Computer-Aided Drafting I

Second semester
Trigonometry for Technology
Social Science Elective
Dimensioning
Tolerancing
Production Drawings
Advanced Computer Aided Design
Manufacturing Processes

SECOND YEAR

First semester
Elective
Newtonian Physics
Machine Elements
Gear Design
Cam Design
Jig, Fixture, & Tool Design

Second semester
Elective
Introduction to Electronics
Machine Tool Processes II
Mechanisms
Gear Trains
Degree Project
Strengths & Properties of Materials

JOB TITLES:machine technician, drafter, computer aided drafter/designer

Students' math selection should prepare them to take Algebra for Technology at the Community College level and to successfully complete the math placement test that is administered at the end of their senior year.

Students who successfully complete this program will receive an Associate Degree in Applied Science.

MACHINE DESIGN

DEFINITION: Students in the Machine Design Program will learn about the design of products or mechanisms used in manufacturing. The machine designer works closely with the engineer using drafting to design solutions (drawings that include specifications) to proposed problems. They may design new products or redesign existing products to make them more efficient. Drafting techniques include both traditional drawing and computer aided drafting/design. Upon completion of this program, the student is qualified for employment as a technician in the design of industrial products as well as industrial machinery.

CAREER OPTIONS: Students who complete the Machine Design Program may seek employment as a drafter with potential to advance to machine designer. A drafter prepares detailed drawings from rough sketches, specifications and calculations of a wide variety of products. Drafters draw plans of a wide variety of items and show entire items as well as individual parts complete with dimensions and tolerances. They calculate strength, quality and cost of materials used in the final item. Drafters prepare final drawings containing detailed views of objects and specifications of materials to be used as well as procedures to follow in the fabrication. They work with drafting tools such as compasses, dividers, protractors, triangles and drafting machines.

QUALIFICATIONS: Drafters must be able to perform detailed work accurately, have good eyesight and eye-hand coordination, be able to work independently and as a team member, have artistic ability to do freehand sketching of three-dimensional objects and have the ability to letter with or without drafting aids.

EMPLOYERS: Stanley Bostitch, Inc., A.T. Cross, Electric Boat, G & E Safety Equipment, GTE, and Toray Plastics.

TECH PREP HIGH SCHOOL QUALIFICATIONS: High school Algebra or equivalent, Principles of Technology, Communications

MACHINE PROCESSES

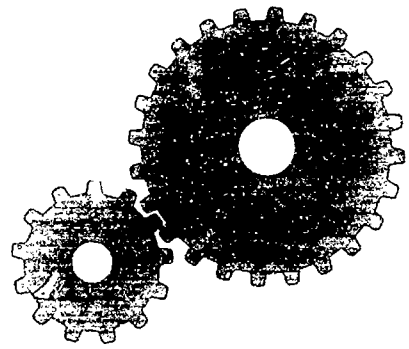
DEFINITION: Students enrolled in the Machine Processes Program learn about the production of tools or elements designed by a machine designer. This Program enables students to gain knowledge in construction of machine tools, dies and machine parts, as well as the principles on which their operation is based. Machining techniques will include traditional as well as computerized manufacturing techniques.

CAREER OPTIONS: Career options available to students who have completed the Machine Processes Program include seeking employment in the metal working industry. Other options include enrolling in an apprentice tool and die making program, for which the two years at CCRI will count directly, or a four-year industrial technology program. Tool and die makers are highly skilled workers who produce tools, dies, and special guiding and holding devices that are used in machines that produce a variety of products. Toolmakers produce jigs and fixtures. They also make gauges and other measuring devices used in manufacturing precision metal parts and repair worn or damaged tools.

QUALIFICATIONS: mechanical aptitude, manual dexterity, good eye-hand coordination, accuracy, dependability, pride in skills, attention to detail, good spatial judgment and ability to work alone

EMPLOYERS: A.T. Cross, Bostitch, Carbon Tech, Federal Products, Madison Industries, Speidel, Tedco, Texas Instruments, Tower Manufacturing Co., General Dynamics, Evans Co., A.T. Wall

TECH PREP HIGH SCHOOL REQUIREMENTS: Mathematics for Technology I and II or equivalent, Principles of Technology, Communications



MACHINE PROCESSES
COLLEGE COURSE OF STUDY

FIRST YEAR

First semester
Composition I
Algebra for Technology
Industrial Blueprint Reading
Lathe I
Mill I
Grinding I
Lathe I Lab
Mill I Lab
Grinding I Lab
Measurement I
App. Machine Tool Geometry

Second semester
Trigonometry for Technology
Technical Drawing Basics
Lathe II
Mill II
Grind II
Lathe II Lab
Mill II Lab
Grind II Lab
Measurement II
Social Science Elective

SECOND YEAR

First semester
Lathe III
Mill III
Grind III
Lathe III Lab
Mill III Lab
Grind III Lab
Diemaking I
Machinery Handbook
Elective

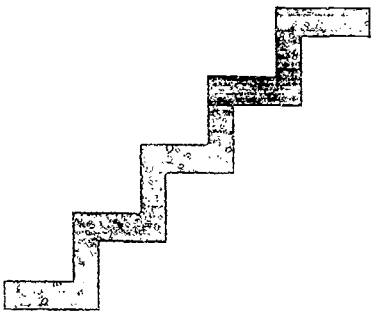
Second semester
Machine Processes Project Lab
Strength and Properties of Materials
Newtonian Physics
Concepts of Numerical Control
Machine Processes Project
Diemaking II
Elective

JOB TITLES tool & die maker, manufacturing engineering technician, numerical-control machine tool operator

Students' math selection should prepare them to take Algebra for Technology at the Community College level and to successfully complete the math placement test that is administered at the end of their senior year.

Students who successfully complete this program will receive an Associate Degree in Applied Science.

Business/Office Administration



The Tech Prep Business/Office Administration Programs are high school/Community College partnership programs which provide an alternative program of study in Business Administration or Office Administration fields for high school students who are enrolled in general education or vocational programs.

This is at least a four-year program that begins by grade 11 and culminates with a two-year Community College Degree. Students enroll in a focused course of study at the high school level. These courses include College Business, College Accounting, Administrative Office Procedures, Math and English - all taught in an applied setting. Students also have the opportunity to earn college credit from the Community College of Rhode Island as well as high school credit for some of the courses in the Program.

COURSE SELECTION

The curriculum at the secondary level is a core curriculum that is occupationally related and highlights goal setting skills. The Tech Prep Business/Office Administration Program encourages students to explore a number of career options in these fields and prepares them to enter a Business or Office Administration Program at the College level.

High school students who plan to enroll in the Business Administration Program at the Community College should take two college-level accounting courses and College Business while in high school; this will allow them to earn seven Community College credits. Students considering enrollment in the Community College's Office Administration Program should enroll in Administrative Office Procedures I and College Accounting I, as well as other business courses.

PARTICIPATING BUSINESS/OFFICE ADMINISTRATION PROGRAMS AT CCRI

The Tech Prep Business/Office Administration Program curriculum at the secondary level prepares students for the following Business/Office Administration Programs at CCRI as well as any of the 22 associate degree programs offered at the College:

Business Administration with concentrations in the following areas:

- •General Business Administration
- •Management
- •Marketing
- •Law Enforcement
- •Accounting

The Office Administration Certificate Program is a two semester course; those enrolled in the certificate program may take a Shorthand Option or a Machine Transcription option. The two-year Associate degree program in Office Administration offers the following courses of study:

- •Administrative Assistant/Secretary (options in Shorthand or Machine Transcription available)
- •Legal Administrative Assistant/Secretary (options in Shorthand or Machine Transcription available)
- •Medical Administrative Assistant/Secretary
- •Medical Transcription Certificate

ACCEPTANCE POLICY - BUSINESS/OFFICE ADMINISTRATION PROGRAMS Students enrolled in the Tech Prep Business Administration Program in high school take Introduction to Business and Elementary Accounting I. Students enrolled in the Tech Prep Office Administration Program take Administrative Office Procedures. It is strongly suggested that students in the Tech Prep Business/Office Administration Program also take Communications and Mathematics for Technology while in high school.

Students who successfully complete these requirements with a C or better and successfully complete the Math and English placement assessments will be guaranteed admission to the Business/Office Administration Programs at the Community College of Rhode Island.

The Tech Prep Business/Office Administration Programs also allow students to earn Community College credits for work which is successfully completed at the high school level. The following guidelines outline how these credits may be earned:

Office Administration Program Guidelines

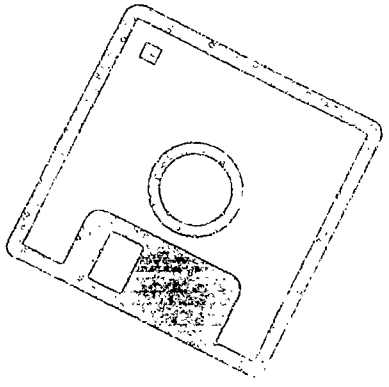
Students who successfully complete at least one year of keyboarding (typewriting) in high school will be permitted to take the challenge exam for the Advanced Keyboarding course at the Community College of Rhode Island. Students who successfully pass this exam will be awarded three credits for that course toward the completion of a certificate or associate degree from the Office Administration Department at the Community College of Rhode Island.

Students who successfully complete one year of shorthand (Gregg or Speedwriting only) in high school will be permitted to take the challenge exam for the Shorthand Theory course. Students who successfully complete two years of Shorthand and who enroll in an associate degree program (not certificate candidates) will be permitted to challenge the Shorthand and Dictation course also.

Students who successfully complete the articulated Elementary Accounting I in high school will fulfill the requirement for the Office Accounting course and earn three additional credits.

Students who follow this prescribed program will have the opportunity to earn up to 12 Community College of Rhode Island credits toward either an Associate Degree or certificate in Office Administration while still enrolled in high school. Associate degree Office Administration programs include: Administrative Assistant/Secretary, Legal Administrative Assistant/Secretary, and Medical Administrative Assistant/Secretary. The first year sequence of courses for Associate Degree programs also satisfies the requirements for the Office Administration Certificate program. One-year certificates are available in office administration and medical transcription.

Other Program Guidelines



- •CCRI will provide the Curriculum Course outline.
- •CCRI faculty, in conjunction with high school faculty, will develop four quarterly tests.
- •High school faculty will administer and grade the four quarterly tests.
- •High schools will use the same textbook as used by CCRI.
- •High school faculty will use quizzes, problems, papers, projects, or other related activities to enhance the appreciation of subject material, and these various activities will be taken into consideration when determining student's final grade.
- •High school faculty will determine the student's final grade for the Administrative Office Procedures I course.

Business Administration Program Guidelines

Students will receive Community College of Rhode Island credit contingent upon the following criterion: The student...

... must be enrolled in the Tech Prep Associate Degree Program at the completion of their sophomore year in high school
... must graduate from high school
... complete and pass the College Business course at the high school
... complete and pass the College Accounting I course at the high school
... must matriculate in the Department of Business Administration
... must complete and pass twelve credit hours or more at the Community College of Rhode Island which will include Accounting II.

Other Program Guidelines

- •CCRI will provide Curriculum Course Outline.
- •CCRI faculty, in conjunction with high school faculty, will develop the four quarterly tests.
- •Administering and grading of four quarterly tests will be completed by high school faculty.
- •High schools will use the same textbook as used by CCRI.
- •Quizzes, problems, papers, projects, or other related activities will enhance the appreciation of subject material and will be used in conjunction when determining student's final grade.
- •The high school teacher determines the student's final grade for the College Business and College Accounting I courses.
- •CCRI recommends that College Business be completed in the junior year of high school.

NOTE: The same textbook is used in College Accounting I & II at CCRI. CCRI recommends that high school faculty encourage high school students to purchase the College Accounting I textbook.

The Business Administration Program at the high school level

GRADE 11
English with Applied Communications component
Mathematics for Technology I or equivalent
College Business (3 CCRI credits)*
Other required courses

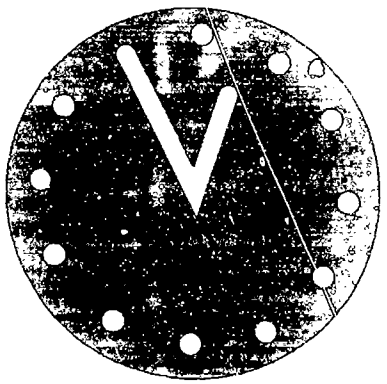
GRADE 12
English with Applied Communications component
Mathematics for Technology II or equivalent
College Accounting I (3 CCRI credits)*
Other required courses

** These courses are one semester college courses that are taught at the high school for a full academic year. They are taught by the high school faculty. Suggested proficiency in English and math are the same as outlined in the Tech Prep curriculum guidelines.*

ASSOCIATE DEGREE COURSES OF STUDY
BUSINESS ADMINISTRATION

The following courses are required of Business Administration students in any program concentration - Accounting, General Business Administration, Marketing, Law Enforcement and Management.

Principles of Economics I
Principles of Economics II
Composition I (or English 1050)
Oral Communication I
A one-semester literature course
Math - varies with course selection; see course descriptions (two semesters)
Two electives from Social Sciences; Geography, History, Labor Studies, Philosophy, Political Science, Psychology or Sociology
Elementary Accounting I and/or II
Law of Contracts
Law of Real Property, Estates or
Law of Business Organization or
Commercial Paper and Secured Transaction
Principles of Management
Principles of Marketing



Accounting Concentration
Students must complete Accounting 2010, Accounting 2020 and at least two other courses from this list:
Income Taxes I
Intermediate Accounting I
Intermediate Accounting II
Principles of Financial Management
Statistical Analysis I
Introduction to Computer..
Cooperative Work Experience

General Business Administration Concentration
Students must select at least 13 credits from this list:
Introduction to Computers
Income Taxes I
Statistical Analysis I
Applied Business Psychology
Introduction to Business
Cooperative Work Experience

Management Concentration
Students must select at least 12 credits from this list:
Introduction to Computers
General Sociology
Income Taxes I
Applied Business Psychology
Managerial Accounting
Principles of Financial Management
Statistical Analysis I
Cooperative Work Experience

Marketing Concentration
Students must select at least 13 credits from this list:
Introduction to Computers
Advertising Principles
Marketing Communications
Sales
Consumer Behavior and Relations
Introduction to Market Research
Cooperative Work Experience I, II

Law Enforcement Concentration

FIRST YEAR

First Semester
Oral Communications I
Intro. to Computers
Criminal Law
General Sociology
Administration of Justice

Second Semester
State & Local Government
Any 1000 level Math
Composition I or English 1050
Criminalistics I
Criminal Law & the Constitution

SECOND YEAR

First Semester
Psychology of Personal Adjustment or General Psychology
Criminalistics II
Law of Evidence
Constitutional Law
Elective

Second Semester
Principles of Management
Criminology
Law & Society
Elective
Elective

Electives
Elements of Economics
Interviewing Skills
Penology
Survey of Labor Relations
Drugs & Human Behavior
Cooperative Education Experience I, II

ASSOCIATE DEGREE COURSES OF STUDY
OFFICE ADMINISTRATION

This program has been designed to train secretaries in any of the areas of concentration listed here. Some options enable a student to earn an Associate's Degree. Other options enable a student to earn a one-year certificate. The courses have been tailored to help students fill the various needs of the business community.

Tech Prep Office Administration Program

GRADE 11
English with Applied Communications component
Mathematics for Technology I or equivalent
Keyboarding (with CCRI challenge credit)*
Shorthand or Speedwriting (with CCRI challenge credit)*
Other required courses
Business electives

GRADE 12
English with Applied Communications component
Mathematics for Technology II or equivalent
Office Procedures (3 CCRI credits)*
College Accounting (3 CCRI credits)*
Other required courses
Business electives

** These courses are one semester college courses that are taught at the high school for a full academic year. They are taught by the high school faculty. Suggested proficiency in English and math are the same as outlined in the Tech Prep curriculum guidelines.*

Office Administration with Shorthand Option

FIRST YEAR

First Semester
Business File Management
Keyboard Applications for Business I or Advanced Keyboarding Applications for Business
Editing Skills for Transcription I
Office Accounting
Intro. to Computers
Business Writing for Secretaries

Second Semester
Shorthand Theory: Speedwriting
Keyboard Applications for Business II
Editing Skills for Transcription II
Administrative Office Procedures I
Business Math
Intro. to Word Processing

SECOND YEAR

First Semester
Shorthand Dictation/Transcription or Advanced Shorthand Dictation/Transcription
Administrative Office Procedures II
Applied Document Processing I
Oral Communication I
Psychology of Personal Adjustment

Second Semester
Applied Document Processing II
Law of Contracts
Cooperative Work Experience or Office Administration Career Development
Composition I
Administrative Office Management
Social Science elective

Office Administration with Machine Transcription Option

FIRST YEAR

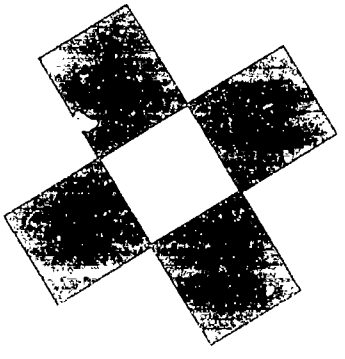
First Semester
Business File Management
Keyboard Applications for Business I or Advanced Keyboarding Applications for Business
Editing Skills for Transcription I
Office Accounting
Introduction to Computers
Business Writing for Secretaries

Second Semester
Administrative Machine Transcription I
Keyboard Applications for Business II
Editing Skills for Transcription II
Administrative Office Procedures I
Business Math
Introduction to Word Processing

SECOND YEAR

First Semester
Administrative Machine Transcription II
Administrative Office Procedures II
Applied Document Processing I
Oral Communication I
Psychology of Personal Adjustment

Second Semester
Applied Document Processing II
Law of Contracts
Cooperative Work Experience I or Office Administration Career Development
Composition I
Administrative Office Management
Social Science elective



Legal Administrative Assistant/Secretary

FIRST YEAR
Same as Office Administration with Shorthand or Machine Transcription Option

SECOND YEAR
Shorthand option

First Semester
Shorthand Dictation/Transcription or Advanced Shorthand/Trans.
Legal Document Processing
Law of Contracts
Oral Communication I

Second Semester
Applied Document Processing I
Cooperative Work Experience or Office Administration Career Development
Legal Office Administration
Legal Forms & Terminology
Psychology of Personal Adjustment
Social Science Elective

Legal Administrative Assistant/Secretary with Machine Transcription Option

First Semester
Administrative Machine Transcription II
Legal Document Processing
Law of Contracts
Law of Business Organization
Oral Communications I

Second Semester
Applied Document Processing II
Cooperative Work Experience I or Office Administration Career Development
Legal Office Administration
Legal Forms & Terminology
Psychology of Personal Adjustment
Social Science Elective

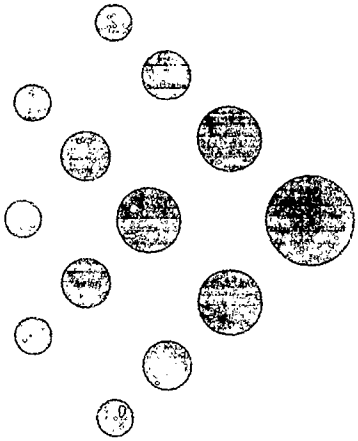
Medical/Administrative Secretary/ Assistant

FIRST YEAR
Same as Office Administration with Shorthand or Machine Transcription Option

SECOND YEAR

First Semester
Medical Document Processing
Medical Terminology
Anatomy & Physiology
Psychology of Personal Adjustment
Oral Communication I
Medical Machine Transcription I

Second Semester
Medical Machine Trans. II
Medical Cooperative Work Exp.
Medical Office Administration
Introduction to Pharmacology
Clinical Procedures
Composition I
Social Science Elective



Allied/Dental Health

The Tech Prep Allied/Dental Health Associate Degree Program is a well-planned program of study that includes courses in Communications, Mathematics for Technology and Applied Biology/Chemistry, all taught with the use of practical activities and labs related to the student's chosen area of study.

The Tech Prep Allied/Dental Health Associate Degree Program at the high school level academically prepares students to enter an allied or dental health program at the postsecondary level.

COURSE SELECTION

It is recommended that students considering enrollment in the Tech Prep Allied Health Program take the following courses while in high school: Principles of Technology I and II and/or Applied Biology/Chemistry I and II, English with an Applied Communications component, Mathematics for Technology I and II, and Algebra I. A strong background in science and math is required of most allied and dental health programs at the Community College of Rhode Island.

TECH PREP CURRICULUM FOR ALLIED/ DENTAL HEALTH PROGRAMS SECONDARY LEVEL

GRADE 11
Principles of Technology I and/or Applied Biology/ Chemistry I (ABC I)*
English/Applied Communications
Math (Mathematics for Technology I, II, Elementary Algebra Part I, Algebra I)
Physical Education
Other required coursework
Electives

GRADE 12
Principles of Technology II and/or ABC I, II*
English/Applied Communications
Math (Mathematics for Technology II, Elementary Algebra Part II, Geometry)
Physical Education
Other required coursework
Electives

**Applic I Biology/Chemistry may be taken in grades 9 and/or 10 where applicable; this is a one- to two-year program.*

PARTICIPATING ALLIED HEALTH PROGRAMS AT CCRI

The Tech Prep Allied Health Program curriculum at the secondary level prepares students for the following Allied Health Programs at CCRI as well as any of the 22 associate degree programs offered at the College:

- Cardio-Respiratory Care
- Radiography
- Medical Lab Technology
- Phlebotomy

ACCEPTANCE POLICY

There are a limited number of guaranteed admissions slots which are reserved for Tech Prep Allied Health students who plan to enroll in an Allied Health Program at the Community College of Rhode Island. These slots are allotted to students based on academic performance and date of application submission. Students who do not receive guaranteed admission to the Community College's Allied Health Programs will be placed on a waiting list and may complete the necessary general education requirements at the College before beginning the particular program in which they are interested.

All dental health students must pass prerequisite college courses before being accepted into the Program. An acceptance policy for Tech Prep students wishing to enter CCRI's dental health program is being developed.

CARDIO-RESPIRATORY CARE

DEFINITION: Respiratory Care (RC) is an allied health specialty employed under medical supervision in the treatment, management, control, diagnostic evaluation and care of patients with deficiencies and abnormalities associated with the cardiopulmonary systems of the body.

CCRI offers a two-year integrated respiratory therapist program (six semesters) which incorporates college classes with clinical practice. The Community College offers a fully-accredited program in Cardio-Respiratory Care. Program graduates earn an Associate in Applied Science Degree and must pass a national entry-level (CRTT) examination in order to obtain a state license to practice respiratory care. They are eligible to sit for advanced level national examinations.

CAREER OPTIONS: The respiratory care practitioner may perform multi-dimensional tasks within the hospital - intensive care, health screenings, EKGs and more. Outside the hospital setting, the respiratory care practitioner provides home respiratory care and educates the patient and his/her family.

QUALIFICATIONS: knowledge of latest equipment, background in math and science, interpersonal skills.

EMPLOYERS: Kent County Memorial Hospital, Pawtucket Memorial Hospital, Rhode Island Hospital

TECH PREP HIGH SCHOOL REQUIREMENTS: Principles of Technology I and II and/or Applied Biology/Chemistry I and II, Mathematics for Technology I and II and/or Elementary Algebra, Algebra I, Geometry; English with an Applied Communications component.

CARDIO-RESPIRATORY CARE COLLEGE COURSE OF STUDY

Recommended sequence of courses:

First semester
Composition I
Algebra for Technology
Human Anatomy

Second semester
Human Physiology
Health Science Chemistry I
Elective (not a math or science course)
Introduction to Respiratory Care**
Human Relations Seminar

Third semester
Introductory Microbiology
Respiratory Care I
Development, Structure/Function of the Normal Lung
Clinical Practicum I (8 hrs. wk. x 15 wks.)

Fourth semester
Respiratory Care II
Clinical Practicum II (32 hrs. wk. x 5 wks.)

Fifth semester
Cardiopulmonary Diseases I
Respiratory Care III
Clinical Practicum III (24 hrs. wk. x 15 wks.)

Sixth semester
Cardiopulmonary Diseases II
Respiratory Care IV
Clinical Practicum IV (24 hrs. wk. x 15 wks.)(24 hrs. wk. x 1 wk.- Neonatal)

***A prerequisite to Introduction to Respiratory Care is admission to the Cardio-Respiratory Care Program and concurrent enrollment in CHEM 1180, which is Health Science Chemistry I.*

Note to Full-Time Students. It is recommended that full-time students take a minimum of seven (7) credits during their first semester (summer), 18 credits during their second semester, 13 credits during their third semester, seven (7) credits during their fourth semester (summer), 15 credits during their fifth semester, and 15 during their sixth semester

JOB TITLES: respiratory therapist

PHLEBOTOMY

DEFINITION: A phlebotomist is a person who obtains blood samples for clinical laboratory testing. The rapid and expanded growth of scientific knowledge and technology has resulted in an increase in the volume of testing, the development of new and varied test systems, and a commitment to quality assurance in the clinical laboratory.

For full-time students, the Phlebotomy Program will take one semester. For part-time students, the Program will take two semesters in the evening.

The Phlebotomy certificate program is a one semester program which includes 160 hours of clinical training at an affiliated site, such as a hospital, private lab, or clinic. The Program includes lectures and laboratory experiences at CCRI as well as the practical training at the clinical site. Students must successfully complete the lecture and laboratory portion during the first 11 weeks of the program before they are allowed to proceed to the practical training.

After successfully completing this training, a student will be eligible to take a national certification exam in Phlebotomy. The training program at CCRI is an integrated program that combines theory with technical skills development under the direction of the program coordinator. Students who successfully complete the program will receive a certificate from CCRI.

CAREER OPTIONS: The phlebotomist can be employed in private labs, doctors' office laboratories, hospital labs, clinics and emergency rooms.

QUALIFICATIONS: competence in both technical and interpersonal skills

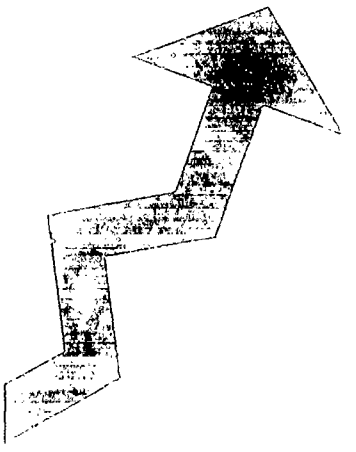
EMPLOYERS: Harvard Community Health, Landmark Medical Center, Kent County Memorial Hospital, Hoechst Celanese Corp., RI Blood Center

TECH PREP HIGH SCHOOL REQUIREMENTS: Principles of Technology I and II and/or Applied Biology/Chemistry I and II, Math for Technology I and II and/or Elementary Algebra, Algebra I, Geometry; English with an Applied Communications component.

PHLEBOTOMY COURSE OF STUDY AT COLLEGE LEVEL

Day and evening program. Students must be accepted in Program before taking any major requirements.

Phlebotomy I
Phlebotomy II



MEDICAL LABORATORY TECHNOLOGY

First Semester
Intro. to Dental Hygiene (Admission Requirement)
General Biology-Zoology
Health Science Chemistry I
Composition I
Algebra for Technology
General Psychology
Introduction to Clinical Laboratory Science

Second Semester
Health Science Chemistry II
Bacteriology
Serology/Immunohematology
Urinalysis

Courses which are recommended to be taken the summer between first and second year or after first and second sequence courses are completed:
Clinical Serology/Immunohematology
Clinical Urinalysis

Fourth Semester
Liberal Arts elective (not a math or science course)
Clinical Microbiology I
Hematology
Clinical Chemistry I

Fifth Semester
Clinical Microbiology II
Clinical Hematology
Clinical Laboratory Science Seminar
Clinical Chemistry II

JOB TITLES: medical laboratory technician
Students who successfully complete the Medical Laboratory Technology program at CCRI will receive an Associate in Applied Science degree and are eligible to take the National Registry Exam for M.L.T. given by recognized agencies

RADIOGRAPHY

First semester
Algebra for Technology
Introduction to Radiography
Principles of Radiography I

Second semester
General Psychology
Principles of Radiography II
Radiography, Anatomy & Physiology
Radiographic Positioning I
Clinical Education I
Patient Care for Radiographers

Third semester
Composition I
Principles of Radiography III
Radiographic Physics
Radiographic Positioning II
Clinical Education II

Fourth semester
Radiographic Seminar I
Clinical Education III

Fifth semester
Literature elective
Intro. to Computers
Special Procedures
Quality Assurance in Radiography
Applied Radiographic Physics
Clinical Education IV

Sixth semester
Two (2) Liberal Arts Electives
Intro. to Radiation Biology
Cross Sectional Imaging
Radiographic Seminar II
Clinical Education V

JOB TITLES: radiographer
Students who successfully complete the Radiography Program at CCRI earn an Associate Degree in Applied Science.

MEDICAL LABORATORY TECHNOLOGY

DEFINITION: A medical laboratory technician is an individual who works in a laboratory running general lab tests in departments such as chemistry, hematology, blood bank, bacteriology, urinalysis, and serology.

The Medical Laboratory Technology course of study at the Community College of Rhode Island is a two-year program which includes clinical experience. At the end of this experience, the students are eligible to sit for the registry examination which certifies them to work in this field. The training program at CCRI is an integrated program that combines theory with technical skills. This program includes a 23-week supervised clinical experience at a local hospital under the direction of the college faculty.

CAREER OPTIONS: Individuals who complete this course of study may work in private labs, doctors' office laboratories, hospital labs, research, sales and commercial labs.

QUALIFICATIONS: knowledge of the techniques of the operation, care and maintenance of the latest equipment; strong background in math and science.

EMPLOYERS: Massachusetts General Hospital, Women and Infants Hospital, Roger Williams Hospital.

TECH PREP HIGH SCHOOL REQUIREMENTS: Principles of Technology I and II and/or Applied Biology/Chemistry I and II, Mathematics for Technology I and II and/or Elementary Algebra, Algebra I, Geometry, English with an Applied Communications component.

RADIOGRAPHY

DEFINITION: A radiographer is a person who uses x-radiation and a knowledge of anatomy and imaging principles to aid physicians in the diagnosis of disease, in monitoring patient progress, and in controlled screenings to help prevent disease.

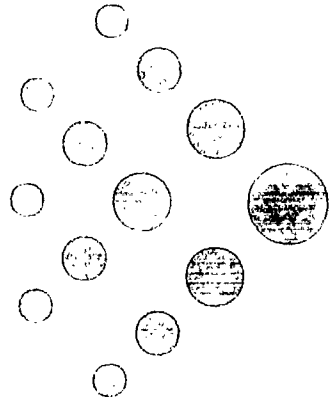
The Radiography Program at CCRI is a two-year, six semester program if the student attends full-time. The program incorporates college classes with clinical practice. The Community College of Rhode Island offers a fully-accredited program in Radiography. This 24-month program begins in June; students should apply in the fall prior to the year in which they wish to begin.

CAREER OPTIONS: Radiographers work in hospitals, clinics, physicians' offices, and private emergency rooms. There are round-the-clock job opportunities, and many part-time positions are also available.

QUALIFICATIONS: knowledge of anatomy and imaging principles, strong math and science background

EMPLOYERS: Newport Hospital, New England Health Care, Kent County Memorial Hospital, Miriam Hospital.

TECH PREP HIGH SCHOOL REQUIREMENTS: Principles of Technology I and II and/or Applied Biology/Chemistry I and II; Mathematics for Technology I and II and/or Elementary Algebra, Algebra I; English with an Applied Communications component.



DENTAL HYGIENE

FIRST YEAR

First Semester
Human Anatomy (Admission Requirement)
Survey of Biomedical Chemistry
Oral Communication I
Dental & Oral Anatomy
Dental Hygiene I
Clinical Dental Hygiene I
Human Physiology

Second Semester
Introductory Microbiology
Composition I
Oral Embryology & Histology
Dental Hygiene II
Clinical Dental Hygiene II

SECOND YEAR

First Semester
Oral Radiography
Dental Materials
Dental Materials Lab for Dental Hygienists
Pathology
Dental Hygiene III
Clinical Dental Hygiene III
Periodontics

Second Semester
Community Dental Health
Clinical Periodontics
Dental Hygiene IV
Clinical Dental Hygiene IV
General Psychology
General Sociology
Essentials of Pharmacology & Therapeutics

JOB TITLES: dental hygienist, dental assistant
Students who successfully complete the dental hygiene program at CCRI receive an Associate in Applied Science degree.

DENTAL HYGIENE PROGRAM

DEFINITION: A dental hygienist is a licensed provider of preventative dental patient care services.

Students in the Dental Hygiene program at CCRI take courses in four major areas: general studies, basic sciences, dental sciences, and dental hygiene science. The Dental Hygiene curriculum is a challenging one, but it is interesting, practical and applicable to everyday life.

Dental hygiene classes are of several types: lecture, laboratory and clinic. The majority are of the "hands-on" laboratory and clinics. CCRI has a dental hygiene clinic on campus so students may treat patients under faculty supervision during the training program.

Entrance to the Dental Hygiene Program at CCRI is currently competitive. However, students whose background includes college preparatory or Tech Prep courses in English, math and science, (including algebra and chemistry) should be better prepared to successfully complete the Program.

Students whose background does not include these courses may want to take them at the College level before applying to the Dental Hygiene program at CCRI.

CAREER OPTIONS: Dental hygienists work in dental offices and clinics, hospitals, schools and military installations. Their duties include cleaning teeth, taking x-rays, educating patients, and providing other preventative services. Hygienists also teach in schools of dental hygiene, coordinate dental public health programs, and work in dental hygiene research or dental hygiene product sales.

QUALIFICATIONS: proficiency in English, mathematics and chemistry, interpersonal skills

EMPLOYERS: Bristol Dental Associates, The Family Dentist, Norfolk County Dental, Woonsocket Dental Assoc., various private practitioners.

TECH PREP HIGH SCHOOL REQUIREMENTS: Principles of Technology I and II and/or Applied Biology Chemistry I and II; Mathematics for Technology I and II and/or Elementary Algebra, Algebra I, Geometry.

DENTAL ASSISTING

FIRST YEAR

First Semester
Anatomy & Physiology
Composition I
Oral Biology I
Preventative Dentistry
Chairside Dental Assisting I
Oral Radiography
Dental Materials
Dental Materials Lab for Dental Assistants

Second Semester
Introduction to Pharmacology
Oral Communications I
Psychology of Personal Adjustment
Oral Biology II
Chairside Dental Assisting II **
Dental Office Procedures

JOB TITLES: dental assistant, orthodontic assistant
Students who successfully complete the Dental Assisting program at CCRI are awarded a certificate by the College. Graduates are eligible to sit for a nationally-recognized certification examination administered by the Dental Assisting National Board, Inc.

DENTAL ASSISTING CERTIFICATE

DEFINITION: A dental assistant is an individual who helps a dental professional deliver dental care services to the public. As dentistry becomes more technologically complex, practitioners have a greater need for skilled assistance from knowledgeable personnel.

The Community College of Rhode Island has the only Dental Assisting Program in Rhode Island which is accredited by the Commission on Dental Accreditation.

At the College level, dental students spend their first semester on campus taking courses. Second semester students spend two-and-a-half days per week gaining on-the-job-experience in off-campus clinical facilities. The other two-and-a-half days are spent in classes on campus. Chairside dental assisting, including dental specialties, continue during this portion of the program. The curriculum for the dental assisting program includes a mixture of lectures, on-campus laboratory classes and clinical experience. Most of the students' experiences are hands-on in nature.

Upon successful completion of the dental assisting course of study, students are awarded a certificate by the College. Graduates are eligible to sit for a nationally-recognized certification examination administered by the Dental Assisting National Board, Inc.

CAREER OPTIONS: Most dental assistants work in private dental offices or clinics. Positions are also available in hospitals, schools, military clinics, insurance companies, research institutions and dental product sales.

QUALIFICATIONS: proficiency in mathematics and English, interpersonal skills, knowledge of technology associated with chairside dental assisting

EMPLOYERS: Maxillofacial Surgery Ltd., Orthodontic Associates, various private practitioners.

TECH PREP HIGH SCHOOL REQUIREMENTS: Principles of Technology I and II and/or Applied Biology/Chemistry; Mathematics for Technology I and II and/or Elementary Algebra, Algebra I; English with an Applied Communications Component.

APPENDICES

SAMPLE PLACEMENT-TEST QUESTIONS: ENGLISH

WRITING PART I:

Directions: In each of the following sentences find out what is wrong, if anything. In deciding whether there is something wrong with a sentence, consider the way a sentence should be written in standard written English, the kind of English usually found in textbooks. Remember that this is sometimes different from the kind of English that you use in talking with your friends.

Some sentences are acceptable without change.
No sentence contains more than one error.

If the sentence has an error, you will find that the error is underlined and lettered. Assume that all other parts of the sentence are acceptable and cannot be changed.

When you find an error, select the one underlined part that must be changed in order to make the sentence acceptable, and blacken the corresponding circle on the answer sheet.

If there is no error, mark circle D.

Sample Questions	Sample Answers
1. Tom ate (A) the hamburger, it (B) was good. (C) No error (D)	1. (A) (B) (C) (D)
2. Next week Mrs. Wilson has visited (A) her (B) sister in Chicago. (C) No error (D)	2. (A) (B) (C) (D)

You will have 10 minutes to work on the 20 questions in Part 1.

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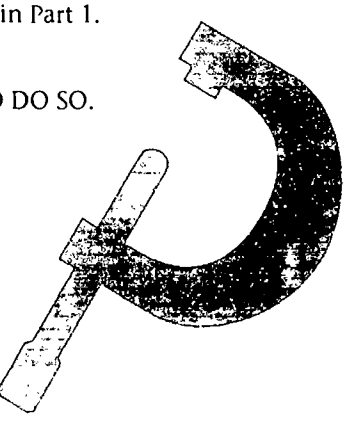

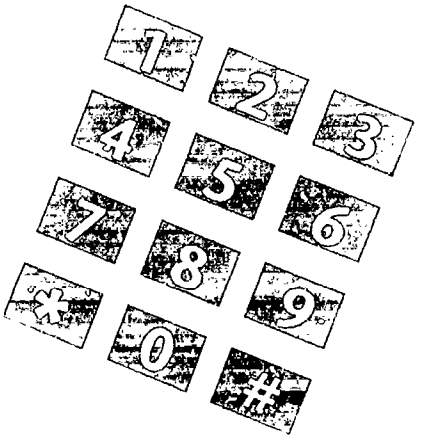

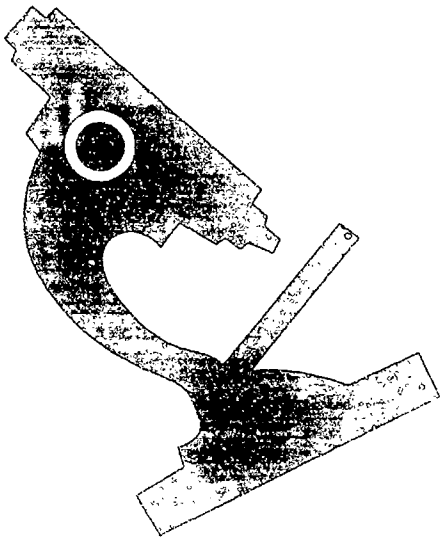

WRITING PART II:

Directions: In each of the following sentences some part of the sentence or the entire sentence is underlined. Beneath each sentence you will find four ways of writing the underlined part. The first of these repeats the underlined part in the original sentence, but the other three are all different. If you think the original sentence is better than any of the suggested changes, you should choose answer A; otherwise you should mark one of the other choices. Select the best answer and blacken the corresponding circle on the answer sheet.

In choosing your answers, follow the requirements of standard written English, the kind of English usually found in textbooks. Remember that it is sometimes different from the kind of English you use in talking with your friends. Pay attention to how clearly ideas are expressed, whether the words convey the meaning they are supposed to convey, and how the sentence is constructed and punctuated. Choose the answer that produces the most effective sentence—clear and exact, without awkwardness or ambiguity. Do not make a choice that changes the meaning of the original sentence.

Sample Questions	Sample Answers
1. Caroline is studying mathematics because she has always wanted to become <u>it</u>. (A) it (B) one of them (C) a mathematician (D) one in mathematics	1. (A) (B) (C) (D)
2. Because Mr. Thomas was angry, <u>he spoke</u> in a loud voice. (A) he spoke (B) and speaking (C) and he speaks (D) as he spoke.	2. (A) (B) (C) (D)

You will have 15 minutes to work on the 20 questions in Part 2.

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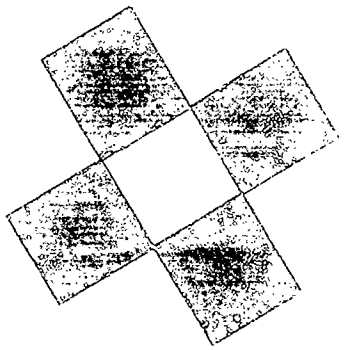
WRITING PART III:

Directions: Choose one of the topics listed below and develop that topic during the specified time allowed. This paper will be used to judge your grasp of grammar rules and to see what your personal writing style is like.

SAMPLE PLACEMENT-TEST QUESTIONS: MATHEMATICS

The Placement Test has four parts with 17 questions in each part: PART I: ARITHMETIC, PART II – ELEMENTARY ALGEBRA, PART 3 – INTERMEDIATE ALGEBRA, and PART IV – TRIGONOMETRY.



PART I – ARITHMETIC

1. Subtract: $5\frac{1}{5} - 3\frac{2}{3}$
2. Divide: $2\frac{1}{3} \div \frac{1}{2}$
3. Add: $38 + 3.8 + .38$
4. 2.3 is what *percent* of 7? Round your answer to the nearest *tenth* percent.
5. The ratio of men to women in a community college is 4 to 5. How many *women* attend if there are 7600 men?

PART II – ELEMENTARY ALGEBRA

6. Perform the indicated operations:
   $-2(5 - 7) - 6$
7. Express as a *single* fraction in simplest form:
   $\frac{x}{2} - \frac{2x + 2y}{4y}$
8. Solve: $3 - 2(x + 4) = x$
9. Solve: $5 - \frac{3x}{4} = 2x$
10. Solve for F: $C = \frac{5}{9}(F - 32)$

PART III – INTERMEDIATE ALGEBRA

11. *Rationalize* the denominator and simplify:
    $\frac{\sqrt{8} + 3\sqrt{2}}{5\sqrt{3}}$
12. Express in simplest form *without* negative exponents:
    $\left(\frac{x^3 \cdot y^2}{xy}\right)^{-1}$
13. Solve this *system* of equations:
    $2x - y = 4$
    $3x - 2y = 1$
14. Solve:
    $3\sqrt{x} - x = 2$
15. Given the coordinates of the two points $P_1(1,2)$, $P_2(-2,3)$, determine the *slope*.

PART IV – TRIGONOMETRY

16. Graph the sine and cosine functions on the same axes. Then determine the interval(s) below for which $\sin\theta > \cos\theta$:
    $(0° \le \theta < 90°, 90° \le \theta < 180°,$
    $180° \le \theta < 270°, 270° \le \theta < 360°)$
17. Solve for all values of θ such that $0 \le \theta < 360°$
    $2\sin^2\theta - \sin\theta = 0$
18. Given that $\cos\theta = \frac{\sqrt{2}}{2}$, determine the *values of* θ between 270° and 450°.
19. Express as a *single* trigonometric function in simplest form:
    $\frac{\csc\theta}{\cot\theta}$
20. Given that $\tan\theta = -\frac{2}{3}$ and θ is in Quadrant II, determine the value of *sec* θ.

ANSWERS

1. $1\frac{8}{15}$
2. $4\frac{2}{3}$
3. 42.18
4. 32.9%
5. 9500 women
6. -2
7. $\frac{xy - x - y}{2y}$
8. $x = -\frac{5}{3}$
9. $x = \frac{20}{11}$ or $1\frac{9}{11}$
10. $F = \frac{9}{5}C + 32$ or $\frac{9/c + 160}{5}$
11. $\frac{\sqrt{6}}{3}$
12. $\frac{1}{x^2y}$
13. (7, 10)
14. 1, 4
15. $-\frac{1}{3}$
16. $90° \le \theta < 180°$
17. 0°, 30°, 150°, 180°
18. 315°, 405°
19. $\sec\theta$
20. $-\frac{\sqrt{13}}{3}$

RHODE ISLAND TECH PREP

Tech Prep Associate Degree Program
STUDENT AGREEMENT

I understand that the Tech Prep Associate Degree Program requires a two-year commitment in high school. I understand that I must enroll in the required courses for my chosen program of study and participate in the program activities which will include informational workshops and visits to the Community College of Rhode Island. I understand what is expected of me in this program and I will do my best to fulfill the program requirements.

Student signature _____

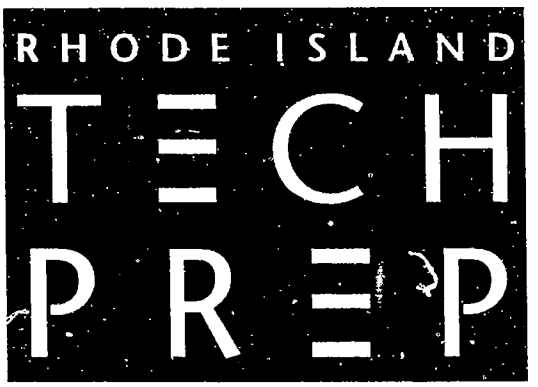
School _____

Date _____

As a parent/guardian, I support _____'s participation in the Tech Prep Associate Degree Program.

Parent/guardian signature _____

Community College of Rhode Island
400 East Avenue, Warwick, Rhode Island 02886 401.825.2143 TDD 401.825.2307



Tech Prep Associate Degree Program
Community College of Rhode Island

Congratulations! You have been selected to participate in the Tech Prep Associate Degree Program, a partnership program between the Community College of Rhode Island and _____ High School. As a participant in this Program, you will be asked to meet the following Program objectives:

- complete two years of the Principles of Technology in grades 11 and 12 or one year of Principles of Technology and one year of another science
- complete four years of Math beginning in grade 9 to include Applied Math I and II or equivalent and Algebra I
- complete four years of English to include one year of Applied Communications or equivalent
- participate in a series of career development activities conducted by the Community College of Rhode Island in grades 10, 11, and 12

When you successfully complete the first two years of the Tech Prep Associate Degree Program, CCRI will:

- guarantee your acceptance into specific technical programs at the College
- schedule an early registration day for course selection for Tech Prep Associate Degree Program students
- waive the application fee for Tech Prep Associate Degree Program students

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RHODE ISLAND TECH PREP

The US Department of Education has funded the Tech Prep Demonstration project for the integration of vocational and academic learning.