

Gloucester County Institute of Technology

Course Selection Guide

2023-2024



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GUIDANCE AND COUNSELING SERVICES

The Gloucester County Institute of Technology has guidance counselors on staff who are specialists in both career planning and college admissions requirements. By working with them, students can be assured that the courses they select each year will prepare them for the career goals they have set.

The process for course selection encourages open discussion between students, parents, counselors and teachers so the student is comfortable with his or her schedule. Parents can be assured that their child will be prepared for a successful future.

This Course Selection Guide includes the academic and career preparation courses offered for the next school year within each of the programs.

GRADUATION REQUIREMENTS

Students may graduate from the Gloucester County Vocational-Technical School District when they have acquired a minimum of 120 credits and meet all graduation requirements in accordance with N.J.A.C.6A:8-5.1 and GCVTSD policy 5460.

New Jersey State Required Courses to Graduate

- 5 credits of World History
- 10 credits of U.S. History
- 20 credits of Language Arts Literacy
- 5 credits of World Language
- 15 credits of Science (including at least 5 credits in a laboratory biology/life science or the content equivalent; an additional laboratory/inquiry based science course including chemistry, environmental science, or physics; and a third laboratory/inquiry based science course)
- 15 credits of Mathematics (including Algebra I and Geometry or the content equivalent and a third year of math that builds on the concepts and skills of algebra and geometry and prepares students for college and 21st century careers)
- 3.75 credits of Health, Safety, and Physical Education during each year of enrollment
- 5 credits Visual and Performing Arts
- 5 credits of 21st Century Life and Careers, or Career-Technical Education
- 2.5 credits of Financial, Economic Business and Entrepreneurial Literacy
- Participating in a minimum of 1 (one) work-based learning experience such as: job shadowing, co-ops, paid and unpaid internships, school-based enterprises, and service learning

- Graduating classes of 2024 – 2026, must complete the New Jersey Graduation Proficiency Assessment in 11th grade. If the student did not demonstrate proficiency by passing the ELA or math component, such students may access the following pathways:
 - Pathway 2 – by meeting the designated cut score on a substitute competency test
 - Pathway 3 – by submitting, through the district, a student portfolio appeal to the New Jersey Department of Education.
- PLEASE NOTE: Meeting the state testing requirement for graduating may be subject to change based on the NJ DOE requirements each year.
- Meet the attendance requirement set forth in district policy 5200

Note: Students will receive a career specialization-endorsed diploma. They will be required to acquire a minimum of 140 credits, meet all graduation requirements in accordance with N.J.A.C.6A:8-5.1, complete all requirements for career specialization; including any required exit testing for their specific career area, successfully complete 45 credits in the mandated career major specialization course work, and earn additional elective credits as outlined in the Curriculum Guide.

GRADUATION OPTIONS

INDIVIDUALIZED STUDENT LEARNING OPPORTUNITIES (District Policy 5460)

The 120 credit requirement set forth in N.J.A.C. 6A:8-5.1 may be met in whole or in part through program completion of a range of experiences that enable students to pursue a variety of personalized learning opportunities, as follows:

District boards of education shall establish a process to approve individualized student learning opportunities that meet or exceed the Core Curriculum Content Standards.

Individualized student learning opportunities in all Core Curriculum Content standards areas include, but are not limited, to the following:

- (A) Independent study;
- (B) Online learning;
- (C) Work-based programs, internships, apprenticeships;
- (D) Study abroad programs;
- (E) Student exchange programs;
- (F) Service learning experiences; and
- (G) Structured learning experiences.

Individualized student learning opportunities based upon specific instructional objectives aimed at meeting or exceeding the Core Curriculum Content Standards shall:

- (A) Be based on student interest and career goals as reflected in the Personalized Student Learning Plans as they are phased in according to the schedule of implementation set forth at N.J.A.C. 6A:8-3.2(a)1;
- (B) Include demonstration of student competency;
- (C) Be certified for completion based on the district process adopted

- (D) Be on file in the school district and subject to review by the Commissioner of his/her designee.

Students wishing to apply for individualized learning opportunities must fill out an application, in its entirety, and submit it to the Individualized Learning Committee for approval, a minimum of two weeks prior to the start of said individual learning opportunity. Applications turned in late will not be accepted to be reviewed.

Individual learning opportunities will only be approved for New Jersey Department of Education graduation required courses.

Applications are located in the Guidance office.

GRADING

PROCEDURE

All teachers will use the following Grading System in determining the grades of all students:

Letter Grade		Numeric Grade
A		100-92
B		91-84
C		83-75
D		74-68
F		67-0
Inc.		Incomplete

Students who fail to earn at least a 68 final average in a non-elective course as defined in N.J.A.C. 6A:8-5.1 and who attend and receive a passing grade in an approved summer school make-up program will receive the grade that they earn. Both grades will appear on the student's transcript. Both grades will be used to calculate a student's grade point average and rank in class.

INCOMPLETES

Students who are absent from school with excused absences will be assigned a "0" and given the opportunity to make up their missing assignments. A score will be entered into the student's gradebook for any work completed. After the designed time for completing missed assignments is over, a grade of "0" will remain as a final grade for any assignments not completed.

Students who receive an "Incomplete" will adhere to the following guidelines:

- For every day absent, students will have three days to make up the missed assignment(s).
- If the student fails to complete the assignments within the designated time period, zeros (0) will be assigned for any outstanding assignments, and the final grade will be calculated.

- The principal has the discretion to extend the deadlines for extended illnesses or other extenuating circumstances.

GRADE POINT AVERAGE AND CLASS RANKING

PROCEDURE

The Board recognizes that it is not uncommon for a college to request a student's grade point average and/or rank in class as part of their admissions review process. This policy establishes the guidelines for establishing Grade Point Average and Class Ranking determinations for students enrolled in Gloucester County Vocational-Technical School District (GCVTSD).

- A. All courses taken at GCVTSD will be included in the calculation of Grade Point Average (GPA) and Class Ranking.
- B. The calculation of a student's unweighted Grade Point Average will be based on the final numeric grade, not including weight, for each course.
- C. To determine unweighted Grade Point Average (GPA), the numeric grade, not including weight, earned for each course will be multiplied by the number of credits assigned to the course. The sum of these products will then be divided by the total number of credits attempted.
- D. Students who transfer previously earned high school course credits will have grade points assigned by the calculation process noted above.
- E. Students who transfer previously earned high school course credits will have Rank determined by the following chart (see Rank Weighted GPA below).
- F. To determine class rank, the final numeric grade, plus the added value (based on weight) earned for each course will be multiplied by the number of credits assigned to the course. The sum of these products will then be divided by the total number of credits attempted. Refer to Rank Weighted GPA scale chart.

Numeric Grade	Rank Weighted GPA Scale			
	Weight I Courses – added value of 0	Weight II Courses – added value of 4	Weight III Courses – added value of 8	Weight IV Courses – added value of 10
100	100	104	108	110
99	99	103	107	109

Numeric Grade	Rank Weighted GPA Scale			
	Weight I Courses – added value of 0	Weight II Courses – added value of 4	Weight III Courses – added value of 8	Weight IV Courses – added value of 10
98	98	102	106	108
97	97	101	105	107
96	96	100	104	106
95	95	99	103	105
94	94	98	102	104
93	93	97	101	103
92	92	96	100	102
91	91	95	99	101
90	90	94	98	100
89	89	93	97	99
88	88	92	96	98
87	87	91	95	97
86	86	90	94	96
85	85	89	93	95
84	84	88	92	94
83	83	87	91	93
82	82	86	90	92
81	81	85	89	91
80	80	84	88	90
79	79	83	87	89
78	78	82	86	88
77	77	81	85	87
76	76	80	84	86
75	75	79	83	85
74	74	78	82	84
73	73	77	81	83
72	72	76	80	82

Numeric Grade	Rank Weighted GPA Scale			
	Weight I Courses – added value of 0	Weight II Courses – added value of 4	Weight III Courses – added value of 8	Weight IV Courses – added value of 10
71	71	75	79	81
70	70	74	78	80
69	69	73	77	79
68	68	72	76	78
67 & below	Score	Score +4	Score +8	Score +10

- G. Students shall be identified for school honors, such as top 5% or top 10% of their class, Best of the Class, on the basis of Rank in Class. School honors will be calculated following the third marking period of their senior year (7 ½ completed semesters). A student who transfers to the Gloucester County Institute of Technology after the start of his/her junior year or has attended fewer than four full semesters will not displace a student who has attended the Gloucester County Vocational-Technical School for three or more years (five or more full semesters) as top 5% or 10% of their class.
- H. Only courses taken in grades 9-12 will be used in determining Grade Point Average (GPA) and Class Weighted Ranking. Credits earned in programs prior to grade 9 will not count toward graduation. Any class taken at another educational institution that is not a New Jersey high school graduation requirement, will not be posted on a GCIT high school transcript.
- I. Transfer students who have previously earned credits for courses in which pass/fail grades are awarded, rather than numeric or letter grades, will have these courses and grades noted on their final transcript. A pass/fail grade will not, however, be included in determining Grade Point Average (GPA) and will not be considered in the calculation of Weighted Class Rank. A transferred letter grade will receive the highest numeric grade.
- J. Graduation requirements fulfilled through individual learning opportunities, will be weighted and ranked through an application process. Please see the student handbook or page 4 of this guide for directions to apply for individual learning opportunities.

Rowan College of South Jersey (RCSJ) Criteria for Placement Test Exemption

Rowan College of South Jersey requires all students to take the placement test. Students may satisfy the placement test (Accuplacer or Accuplacer NextGen) requirement by taking the placement test or by meeting any one of the exemption criteria listed below:

Only students who have met one of the following criteria are eligible to earn college credit:

Reading Exemptions	Minimum Score Required
SAT Evidence-Based Reading and Writing (EBRW)	450
NJSLA/PARCC English/Language Arts (ELA) Grade 11	4
ACT Composite	21
Accuplacer NextGen Reading	250
Writing Exemptions	Minimum Score Required
SAT Evidence-Based Reading and Writing (EBRW)	480
NJSLA/PARCC English/Language Arts (ELA) Grade 11	4
ACT Composite	21
Accuplacer NextGen Sentence Skills	250
Accuplacer NextGen WritePlacer	6
Math Exemptions	Minimum Score Required
SAT Mathematics	500
NJSLA/PARCC Algebra II	4
ACT Composite	21
Accuplacer NextGen Math	255

Honors Level Course Requirements

To be eligible to take an Honors Level course, students must meet the following requirements:

1. Receive a minimum grade of an 88 in the preceding academic course
2. Teacher recommendation in PowerSchool
3. Passed the preceding required NJSLA test
4. Have a minimum lexile score (reading score) for the following grade level:
 - a. 9th grade 1155
 - b. 10th grade – 1208
 - c. 11th and 12th grade - 1285

**Course of Study Required for the Academy of Advanced Manufacturing
and Applied Science
School Year 2023-2024**

Freshman

Introduction to Advanced Manufacturing	15 credits
CP or Honors English I	5 credits
CP or Honors US History I	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Science	5 credits
CP or Honors Spanish I or Italian I	5 credits
Fitness for Life I	5 credits

Sophomore

Introduction to Mechatronic and Digital Manufacturing Systems	15 credits
CP or Honors English II	5 credits
CP or Honors US History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
CP or Honors Spanish II, Italian II	5 credits
Fitness for Life II	5 credits

Junior

Advanced Materials, Designs, IIoT, Data Analytics and Networking	15 credits
CP or Honors English III	5 credits
CP, Honors or College Level World History	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors or Lab Biology	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
Performing Arts or World Language III	5 credits

Senior

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
Personal Finance or Financial Literacy or Performing Arts or World Language IV or Electives 5-30 credits	

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future.

Academy of Advanced Manufacturing and Applied Science – Freshman

Introduction to Advanced Manufacturing (Weight 3)

15 credits

In this course, students are introduced to the basic concepts of Advanced Manufacturing and the many modern technologies used to automate processes. The courses use highly engaging interactive multimedia computer course materials with simulations of the various technologies. The interactive multimedia simulations are combined with hands-on work using real automation equipment to provide an immersive experience. Technologies include: Machine automation, measurement, AC/DC electricity, electrical relay control, fluid power, robotics programming, computer aided design / additive manufacturing, print reading, and CNC programming. Topics include 3D Computer Aided Design (CAD), Robotics programming, CNC programming, electrical control systems, electronic sensors, pneumatics, basic measurement, safety, and materials and processes. Safety and workplace skills are incorporated throughout the curriculum.

Academy of Advanced Manufacturing and Applied Science – Sophomore

Introduction to Mechatronic and Digital Manufacturing Systems (Weight 3) 15 credits

Students will explore projects in Digital Enterprise Systems combining PLCs, robotics, and cloud technologies. This course also introduces networking, CAM, cloud-based data collections, and Lean Manufacturing.

Academy of Advanced Manufacturing and Applied Science – Junior

Advanced Materials, Designs , IIoT, Data Analytics, and Networking (Weight 3) 15 credits

This capstone course deepens the technical skills in Advanced Manufacturing processes, materials, and design while completing an advanced team project. This course features topics like CAD/CAM, CNC, welding, plastics, and materials engineering. This course enriches technical skills in Industry 4.0 systems and the Industrial Internet of Things using managed networks, data analytics software, cybersecurity, variable frequency drives, RFID barcode, and smart sensors. Students will utilize a combination of virtual interactive training, hands-on labs, and formative and summative assessments. A focus on certification and workplace readiness will be integrated throughout the course.

Academy of Advanced Manufacturing and Applied Science – Seniors

Advanced Manufacturing and Applied Science students may choose the following senior options:

1. Take HSOP courses on RCSJ's campus for a discounted fee.
2. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
3. Take Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.

Course of Study Required for the Academy of Biological Sciences
School Year 2023-2024

Freshman

Microsoft Office & Digital Literacy	5 credits
Honors Lab Chemistry for Biological Science	5 credits
Principles of Biomedical Science	5 credits
Fitness for Life I	5 credits
Honors English I	5 credits
Honors US History I	5 credits
Honors Level Mathematics	5 credits
Honors Lab Biology	5 credits
Honors Spanish I or Italian I	5 credits

Sophomore

College Level General Biology for Biological Science	7.5 credits
Medical Interventions	7.5 credits
Honors Lab Chemistry for Biological Science	5 credits
Fitness for Life II	5 credits
Honors English II	5 credits
Honors US History II	5 credits
Honors Level Mathematics	5 credits
Financial Literacy (online)	5 credits
Honors Spanish II, Italian II or Latin II	5 credits

Junior

College Level General Biology II	7.5 credits
Biotechnician Assistant Certification (Semester 2)	2.5 credits
Advanced Topics in Research I & II (Semester 1 & 2)	10 credits
Fitness for Life III or Fitness for Life III – Independent/Sports	5 credits
Honors English III	5 credits
College Level World History	5 credits
Honors or College Level Mathematics	5 credits
College Level Oral Communications (performing arts) or World Language III	5 credits

Senior

College Level Phys Fitness/Contemporary Health at RCSJ	5 credits
College Level English Composition 101 at RCSJ	5 credits
College Level Electives	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future.

Academy of Biological Sciences – Freshman

Microsoft Office & Digital Literacy (Weight 1)**5 credits**

This course teaches the relevant computer concepts and skills needed in today's digital world. You'll learn practical, "real world" skills that can be applied on the job or in the classroom. From basic computer skills to file management and digital citizenship; students will gain a strong foundation before venturing into the world of word processing and spreadsheets and slideshow presentations using Word, Excel, and PowerPoint. This class also prepares the students for the Microsoft Office Specialist: Associate Certification which could lead to college credit for Computer Literacy.

Honors Lab Chemistry for Biological Science (Weight 3)**5 credits**

This course approaches chemistry as a qualitative and quantitative study of the interactions of matter on the subatomic and molecular level. It will begin with the most fundamental of chemical units, the atom. Students will be involved in laboratory research, problem solving, and classroom presentations. Problem solving is essential in defining the intrinsic quantitative nature of chemistry. All students must have a scientific calculator capable of working with exponents. The course is intended for serious and inquisitive students desiring to broaden their knowledge of the physical world. For students of the Academy of Biological Science, this course will cover areas and topics that specifically relate to that career area.

Principles of Biomedical Science (Weight 3)**5 credits**

In this course, students explore the concepts of biology and medicine as they take on roles of different medical professionals to solve real-world problems. Over the course of the semester, students are challenged in various scenarios including investigating a crime scene to solve a mystery, diagnosing and proposing treatments to patients, tracking down a disease outbreak in a hospital, stabilizing a patient during an emergency and collaborating with peers and professionals to design solutions to local and global medical problems.

Academy of Biological Sciences – Sophomore**College Level General Biology for Biological Science (Weight 4)****7.5 credits**

This course offers an investigative approach to the science of biology involving the molecular structure and function of the cell. This is extended to the tissue level of organization and coordinated with the total organism. Emphasis is on nutrition and energy release in an attempt to note the importance of bio-energetics to the cell and organism at large. Laboratory exercises parallel lecture and reading assignments. ****Must have successfully passed high school Lab Biology and meet college placement test exemption (see page 9).***

Medical Interventions (Weight 3)**7.5 credits**

Students follow the life of a fictitious family as they investigate how to prevent, diagnose and treat disease. Students explore methods to detect and battle infections, screen and evaluate the human genetic code, investigate and explore cancers and their treatments, and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

Academy of Biological Sciences - Junior**College Level General Chemistry I(Weight 4)****5 credits**

This is a rigorous college level introduction to chemistry. Topics covered include atomic and molecular structure, bonding, periodic law, chemical reactions, stoichiometry, enthalpy, kinetic

molecular theory and gas laws, and solution chemistry. Students will be involved in laboratory research that supports topics covered in the course. Students are required to have a calculator. ****Must meet college Placement Test Exemption (see page 9).***

College Level General Chemistry II (Weight 4)

5 credits

This continuation of College Level General Chemistry I covers solutions, kinetics, equilibrium, oxidation-reduction, electrochemistry, nuclear chemistry, systematic treatment of metals and nonmetals, thermochemistry, and a brief introduction to organic chemistry. The laboratory exercises support lecture topics. ****Must meet college Placement Test Exemption (see page 9).***

Advanced Topics in Research I & II (Weight 3)

10 credits

This is an honors elective course emphasizing biological research and analysis. The course briefly reviews concepts from life science and moves on to pursue biology topics in more depth. The course focuses on ecology, biotechnology, genetics, evolution, current research and environmental issues, and study skills for science class environments. Students who wish to independently investigate some of their own interests in biology are encouraged to enroll. ****Must meet Honors level requirements (see page 9).***

College Level General Biology II (Weight 4)

5 credits

The origin of new cells and organisms as well as the manner by which genetic material is passed from parent to offspring are investigated in detail through lecture, discussion and lab exercises. Classical and molecular genetics are reviewed and permit the concurrent consideration of the theories relevant in biology today. DNA technology and molecular biology of the gene will be investigated including genetic evolution and the evolution of behavior. ****Must meet college Placement Test Exemption (see page 9).***

Biotechnician Assistant Certification (Weight 3)

2.5 credits

This course will prepare students to sit for the Biotechnology Assistant Credentialing Exam (BACE), an industry-valued credential. Students will review both knowledge and practical skills related to safe and effective laboratory practices. Topics include scientific methods, equipment use and maintenance, measurement and technical skills, applied mathematics, and workplace safety.

Academy of Biological Sciences – Seniors

Biological Science students may choose the following senior options:

1. Take HSOP courses on RCSJ's campus for a discounted fee.
2. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.

Computer Science Track

Freshman – Computer Science

IT Fundamentals	10 credits
Introduction to Cyber Security (Semester 1)	2.5 credits
Cyber Security Essentials (Semester 2)	2.5 credits
CP or Honors English I	5 credits
CP or Honors US History I	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Science	5 credits
CP or Honors Spanish I or Italian I	5 credits
Fitness for Life I	5 credits

Sophomore – Computer Science

IT Essentials	10 credits
Fundamentals of Programming	5 credits
CP or Honors English II	5 credits
CP or Honors US History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
CP or Honors Spanish II, Italian II or Latin II	5 credits
Fitness for Life II	5 credits

Junior – Computer Science

Networking Essentials	15 credits
CP or Honors English III	5 credits
CP, Honors or College Level World History	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Biology	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
Financial Literacy or Performing Arts or World Lang III	5 credits

Senior – Computer Science

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
College Level Personal Finance or Financial Literacy or Performing Arts or World Language IV or Electives	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future

Digital Media Track

Freshman – Digital Media

Microsoft Office & Digital Learning	5 credits
Digital Graphics I	5 credits
Digital Video Production	5 credits
CP or Honors English I	5 credits
CP or Honors US History I	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Science	5 credits
CP or Honors Spanish I or Italian I	5 credits
Fitness for Life I	5 credits

Sophomore – Digital Media

Digital Graphics II	7.5 credits
Digital Video Production II	7.5 credits
CP or Honors English II	5 credits
CP or Honors US History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
CP or Honors Spanish II, Italian II or Latin II	5 credits
Fitness for Life II	5 credits

Junior – Digital Media

Advanced Digital Video Production	7.5 credits
Digital Layout and Design	7.5 credits
CP or Honors English III	5 credits
CP, Honors or College Level World History	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Biology	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
Financial Literacy or Performing Arts or World Lang III	5 credits

Senior – Digital Media

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
College Level Personal Finance or Financial Literacy or Performing Arts or World Language IV or Electives	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student’s PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students’ eligibility for financial aid in the future.

**ACADEMY OF COMPUTER SCIENCE &
DIGITAL MEDIA**

**Computer Science - Freshman
IT Fundamentals (Weight 4)**

10 credits

The TestOut IT Fundamentals Pro course is designed for students who are interested in Information Technology but have limited technical knowledge of computing systems. We'll explore foundational concepts related to computer hardware and software, networking, databases, programming, information systems, and data security. This course includes over 100 hands-on labs to reinforce important concepts. As students perform real-world tasks associated with various IT fields, students will gain a broad understanding of career options that will help them refine interests and make career choices. This course also covers all the objectives necessary to pass the TestOut IT Fundamentals Pro and Comp TIA Fundamentals certification exams.

Introduction to Cybersecurity (Weight 2)

2.5 credits

This course explores cyber trends, threats and staying safe in cyberspace, and protecting personal and company data. Students will learn how to protect personal data and privacy online and in social media. Students will understand why more and more IT jobs require cyber security knowledge and understanding.

Cybersecurity Essentials (Weight 2)

2.5 credits

This course covers foundational knowledge and essential skills for all cybersecurity domains including information security, systems security, network security, ethics and laws, and defense and mitigation techniques use to protect businesses. This course is a precursor to students planning to study CCNA certification (taken in 11th & 12th grades), this course provides foundational security skills for entry-level networking and security roles.

Computer Science - Sophomore IT Essentials (Weight 4)

10 Credits

The IT Essentials (ITE) course introduces students to the fundamentals of computer hardware and software, mobile devices, security and networking concepts, and the responsibilities of an IT professional. The latest release includes mobile devices, Linux, and client side virtualization, as well as expanded information about Microsoft Windows operating systems, security, networking, and troubleshooting.

By the end of the course, students will be able to: Describe the internal components of a computer and assemble a computer system, install and understand operating systems on computers and mobile devices, connect to the Internet and share resources in a networked environment, and troubleshoot using system tools and diagnostic software.

Fundamentals of Programming (Weight 3)

5 credits

In this course students will learn the basic concepts of programming. The fundamental concepts in programming are: variable declaration, basic syntax, data type and structures, flow control structures, functional programming, object-oriented programming, and debugging. Various types of programming will be reviewed.

Computer Science - Junior

Networking Essentials (Weight 4)

15 credits

This course introduces a variety of topics to build students' skills and understanding of networking. The course also introduces networking devices and the Cisco IOS® software. Students will learn how networks are set up, how devices are configured, how communication takes place on a network and the basics of implementing network security best practices which will enhance the students' confidence in communicating their knowledge and work in networking-related professions.

This course includes activities that expand on the course material presented. Upon completion of this course, the end-of-course survey, and the end-of-course assessment, the student will receive a Certificate of Completion.

Computer Science – Senior

1. Take HSOP courses on RCSJ's campus for a discounted fee.
2. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
3. Take CP or Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.

Digital Media - Freshman

Microsoft Office & Digital Literacy (Weight 1)

5 credits

This course teaches the relevant computer concepts and skills needed in today's digital world. You'll learn practical, "real world" skills that can be applied on the job or in the classroom. From basic computer skills to file management and digital citizenship; students will gain a strong foundation before venturing into the world of word processing and spreadsheets and slideshow presentations using Word, Excel, and PowerPoint. This class also prepares the students for the Microsoft Office Specialist: Associate Certification which could lead to college credit for Computer Literacy.

Digital Graphics I (Weight 2)

5 credits

This course includes introductory instruction in graphic design and web development, utilizing the Adobe Creative Suite. Students will be given an introduction to principles of good design. They will learn the basics of combining and manipulating text and graphics to communicate an effective message. This class will create basic design and production projects in Photoshop and Illustrator while understanding the differences between raster and vector images.

Digital Video Production (Weight 2)

5 credits

In this course, students will learn the fundamentals of digital video production. They will produce, direct, shoot, edit and appear in their own productions shot on digital video. Students will become proficient at using the Premiere Pro editing system. Projects will include: photo montage, action editing, dialogue editing, short film production, and commercial production. The student will compile a demo reel of their finished work both in front of and behind the camera.

Digital Media - Sophomore

Digital Graphics II (Weight 2)

7.5 credits

This course will build on the foundation from Digital Graphics I, teaching advanced skills and techniques in Adobe Photoshop. Students will venture into digital photography and editing as they design and produce projects in preparation for the course's Adobe Photoshop certification exam. The class will also push its Adobe Illustrator skills to the next level as they continue to compile portfolio work.

Digital Video Production II (Weight 3)

7.5 credits

In this course students will build upon the video production skill they acquired in 'Digital Video Production I'. Projects will include: DSLR camera control, screenplay writing, short film production, sound effects editing, music video production and an introduction to producing special effect shots. The student will continue to build their demo reel of their finished work both in front of and behind the camera.

Digital Media - Junior

Advanced Digital Video Production (Weight 3)

7.5 credits

In this course students will advance the writing, producing, directing, videography and editing skills they have been building on in 'Digital Video I and II'. Projects will include: screenwriting, Public Service Announcement (PSA) production, short film production, sound design, split screens, green screens, screenwriting, short film production, and an introduction to Adobe Audition, After Effects programs. The student will complete their demo reel of their finished work both in front of and behind the camera. At the end of this course students will sit for their Adobe Certified Associate (ACA) for Premiere Pro.

Digital Layout and Design (Weight 2)

7.5 credits

This class will teach advanced skills and techniques in Adobe Illustrator. Students will venture into Identity and Branding Design while also producing professional-quality projects in preparation for the course's Adobe Illustrator certification exam. The class will also learn about file preparation for digital and pre-press publication utilizing Adobe InDesign. Students will design and layout their portfolios and complete other projects in preparation for the Adobe InDesign certification exam.

Digital Media – Senior

1. Take HSOP courses on RCSJ's campus for a discounted fee.
2. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
3. Take CP or Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.

Course of Study Required for Academy of Construction Technology
School Year 2023-2024

Freshman

Program Specializations (only one program of specialization will be assigned)	10 credits
Building Trades Specialization I	
Electrical Construction Specialization I	
HVACR Specialization I	
Welding Technology Specialization I	
Plumbing/Pipe Fitting Specialization I	
Financial Literacy	5 credits
CP or Honors English I	5 credits
CP or Honors U.S. History I	5 credits
CP or Honors Level Mathematics	5 credits
CP Honors Lab Science	5 credits
CP or Honors Spanish I or Italian I	5 credits
Fitness for Life I	5 credits

Sophomore

Program Specialization (<i>continue in program specialization</i>):	15 credits
Building Trades Specialization II	
Electrical Construction Specialization II	
HVACR Specialization II	
Welding Technology Specialization II	
Plumbing/Pipe Fitting Specialization II	
CP Honors English II	5 credits
CP or Honors U.S. History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
Performing Arts or Academic Elective	5 credits
Fitness for Life II	5 credits

Junior

Program Specialization (<i>continue in program specialization</i>):	15 credits
Building Trades Specialization III	
Electrical Construction Specialization III	
HVACR Specialization III	
Welding Technology Specialization III	
Plumbing/Pipe Fitting Specialization III	
CP or Honors English III	5 credits
CP, Honors or College Level World History	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Biology	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
One Elective (Performing Arts, World Language or Financial Literacy)	5 credits

Senior

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV-Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
Financial Literacy or Performing Arts or World Language IV or	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future.

ACADEMY OF CONSTRUCTION TECHNOLOGY

Construction Technology – Freshman (Weight 1)

10 credits

Building Trades Specialization I

This course is designed to give each student the opportunity to achieve the skills needed to perform the duties of an entry-level worker in the Building Trades. These basic skills are: shop and job safety, measurement skills, math skills, hand tool skills, portable power tool skills, and stationary power tool skills. The student will gain these skills through daily hands on experience.

Electrical Construction Specialization I

Freshman and sophomore students will complete 26 lessons of instruction over a period of 1 semester. These lessons will include electrical safety, materials, tools, basic applied skills and familiarization with the National Electrical Code. While working with the various circuits, the student will learn to work safely around electricity and to use the proper tools for construction wiring.

Heating, Ventilation & Air Conditioning Specialization I

This course covers the equipment and tools found in the Plumbing, Heating and Air Conditioning fields. The students will learn the proper use of the tools and instruments of this trade. Through a combination of classroom and hands-on work, the student will learn to install and service the equipment of these trades.

Welding Specialization I

This introduction course introduces students to welding and oxy-fuel safety. Students will learn the basic concepts of the Shielded Metal Arc Welding, Gas Metal Arc Welding and Gas Tungsten Arc Welding processes including machine set-up, electrode classifications and fillet welds in the flat and horizontal positions. Students will learn how to assemble an oxyfuel cutting station and learn how to cut a mild steel plate safely and properly.

Plumbing/Pipe Fitting Specialization I

This course is designed to give each student the opportunity to achieve the skills needed to perform the work of a Plumber/Pipe Fitter. The student will gain these skills through daily hands-on experience and the introduction of information related to the installation/service of plumbing fixtures and systems. The student will learn how to safely use the tools/materials and safely operate the equipment to perform these tasks.

Construction Technology - Sophomore, Junior, and Senior

Program Specialization Level II, III, and level IV as elective option

Building Trades (Weight 2)

15 credits/year

This course is designed to give the student realistic shop experience and related experience. The course will build upon the skills learned in Introduction to Building Trades. Units of study will include a review of topics learned in that course and will expand into new areas such as shop awareness, career awareness, job safety, materials of construction, hardware of construction, blueprint reading, estimation, scaffolding and ladders, leveling instruments and site work. The student will gain these skills through daily hands on experience in a well-equipped shop setting. Safety is stressed in every phase of the program. This approach leads to the development of a strong base from which the student can successfully enter the construction industry.

Electrical Construction (Weight 2)

15 credits/year

This is the second, third and fourth level of a program that covers major topics in residential electrical construction including basic electrical theory (DC), National and Local Electrical Codes, wiring methods and materials, blueprint reading and layout. Classroom experiences will emphasize splicing, receptacle and switching circuits, new and old work house wiring, testing equipment, troubleshooting, and proper care and safe use of tools used in residential wiring.

Heating, Ventilation & Air Conditioning (Weight 2)

15 credits/year

This course covers the equipment and tools found in the Heating and Air Conditioning fields. The students will learn the proper use of the tools and instruments of this trade. Through a combination of classroom and hands-on work the student will learn to install and service the equipment of these trades. The individual employed in this position will be expected to have a pre-requisite amount of knowledge, attitude, skills and habits required to perform procedures that involve routine, predictable, repetitive, proceduralized tasks involving motor skills and limited theoretical knowledge, while working under close supervision.

Welding (Weight 2)

15 credits/year

The entry-level welder will be able to accomplish common work assignments, interpret drawing and welding symbols, set up shielded metal arc welding operations, set up and perform manual oxyfuel gas cutting operations, remove metal using the air carbon arc cutting process, and visually examine all personal welding and cutting assignments for unfavorable weld and cut edge surfaces. Students will be required to complete AWS Level I written exams and practical welding assignments to receive AWS SENSE Level I certifications. The individual employed in this position will be expected to have a pre-requisite amount of knowledge, attitude, skills and habits required to perform procedures that involve routine, predictable, repetitive, procedural type tasks involving motor skills and limited theoretical knowledge, while working under close supervision.

Plumbing/Pipe Fitting (Weight 2)

15 credits/year

This course is designed to give each student the opportunity to achieve the skills needed to perform the tasks of a Plumber/Pipe Fitter. The student will gain the skills necessary to perform these tasks through the study of the various systems related to plumbing and pipefitting installed in residential and commercial buildings. Through daily hands-on experience the student will practice the installation, repair and service of the components of these systems. Safe operation and handling of the tools, materials and equipment used in these trades is an essential requirement of this course.

Course of Study Required for Academy of Cosmetology
School Year 2023-2024

Freshman

Cosmetology I	15 credits
CP or Honors English I	5 credits
CP or Honors U.S. History I	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Science	5 credits
CP or Honors Spanish I or Italian I	5 credits
Fitness for Life I	5 credits

Sophomore

Cosmetology II	15 credits
CP or Honors English II	5 credits
CP or Honors U.S. History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
One Elective (World Language, Performing Arts, or Financial Literacy)	5 credits
Fitness for Life II	5 credits

Junior

Cosmetology III	15 credits
CP or Honors English III	5 credits
CP, Honors or College Level World History & Cultures	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Biology	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
One Elective (World Language, Performing Arts, or Financial Literacy)	5 credits

Senior

Cosmetology IV	15 credits
Extended Clinic	5 credits
College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
Financial Literacy or Performing Arts or World Language IV or Electives	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future.

ACADEMY OF COSMETOLOGY

Cosmetology I (Weight 2)

15 credits

The Cosmetology I program is the foundation for the Cosmetology education. It will enable students to comprehend and perform entry level skills in wet hairstyling, including braiding, roller placement, pin curls, finger waves, shampooing and scalp treatments, properties of hair and scalp including hair structure, disorders and diseases, infection control, and basic nail techniques. State laws, rules and regulations, related theory, safety, sanitation and professionalism will also be integrated in this course of study.

Cosmetology II (Weight 3)

15 credits

The Cosmetology II Program entails more progressive practical skills – Chemical Texture Services/Permanent Waving and its Related Chemistry, Haircutting, Thermal Styling, inclusive of Blow Dry Styling, Thermal Curling, and Thermal Pressing. Skin Structure, Diseases and Disorders, Hair Removal, Facials and Massage and Make Up techniques. During this level students are eligible to apply for a State of New Jersey Cosmetology Student Permit. Related Theory, Safety, Sanitation, and Professionalism are integrated in this course of study.

Cosmetology III (Weight 3)

15 credits

The Cosmetology III Program continues to build more progressive practical skills – Techniques in Hair Coloring and its Related Chemistry, Men's Hairstyling & Grooming, Chemical Texture Services/Relaxers, Wigs and Hair Additions, Professional Shave, and Employment Skills. During this Level Students will also work on Clientele in the School Salon to begin to prepare for the globally competitive workforce. Related Theory, Safety and Sanitation and Professionalism are integrated in this course of study.

Cosmetology IV (Weight 4)

15 credits

The Cosmetology IV Program is the conclusion to the Cosmetology education. During Semester 1 students will continue to build their practical skills. This will include Advanced Nail Techniques (Nail Extensions, Resin Systems, Liquid and Powder Nail Enhancements, and Light Cured Gels), Principles of Hair Design, Electricity, Anatomy Review and Business Skills. During this Level Students will also work on Clientele in the School Salon to prepare for the globally competitive workforce. The 2nd Semester is dedicated to State Board Licensure Preparation and earning an OSHA 10 industry recognized credential specifically for the cosmetology industry. Licensure Preparation is designed to prepare the Senior Cosmetology student to take the New Jersey State Board of Cosmetology Licensing Exam. It will include both practical and theoretical skills necessary to successfully pass the exam and obtain the state license required to seek employment in the Salon Industry.

Extended Clinic (Weight 2)

5 credits

This course is five days a week in the second semester to practice and prepare for the State Board Exam.

**Course of Study Required for Academy of Culinary Arts & Baking Pastry Arts
School Year 2023-2024**

Freshman

Program Specializations (only one program of specialization will be assigned)

Culinary Arts I	15 credits
Baking & Pastry Arts I	15 Credits
CP or Honors English I	5 credits
CP or Honors U.S. History I	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Science	5 credits
CP or Honors Spanish I or Italian I	5 credits
Fitness for Life I	5 credits

Sophomore

Program Specializations

Culinary Arts II	15 credits
Baking & Pastry Arts II	15 credits
CP II or Honors English II	5 credits
C.P or Honors U.S. History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
One Elective (World Language, Performing Arts, or Financial Literacy)	5 credits
Fitness for Life II	5 credits

Junior

Program Specializations

Culinary Arts III	15 credits
Baking & Pastry Arts III	15 credits
CP or Honors English III	5 credits
CP, Honors or College Level World History & Cultures	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Biology	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
One Elective (World Language, Performing Arts, or Financial Literacy)	5 credits

Senior

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
Financial Literacy or Performing Arts or World Language IV or Electives	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future.

ACADEMY OF CULINARY ARTS AND BAKING & PASTRY ARTS

Culinary Track

Culinary Arts I – (Weight 2) Freshman

15 credits

This course is designed to teach the fundamentals and principles of culinary arts. Emphasis will be placed on ingredient, weights and measures, kitchen math, proper terminology, and equipment use. Also in this course, students will learn the fundamentals and principles of cooking. Emphasis will be placed on mise en place, organization, timing skills, safety, sanitation, knife skills, ingredient uses, recipe preparation, food presentation, and equipment uses.

Culinary Arts II (Weight 2) Sophomore

15 credits

This course is designed to teach the foundations and essentials skills of culinary arts. Emphasis will be placed on introduction to the kitchen, Culinary exploration and service and management skills. Also in this course, students will learn the fundamentals and principles of cooking. Emphasis will be placed on salads, sandwiches, stock, soups, Sauces, Cooking methods, safety, sanitation, introduction to baking, front of the house service, and food service management.

Culinary Arts III (Weight 2) Junior

15 credits

Culinary Arts III is an opportunity for students to further enhance their skills that were acquired in Culinary Arts I and II. While employing all of the skills learned during the freshman and sophomore year, students will be afforded the time to concentrate on particular areas of interest while refining their skills. The skills include research and course work in the areas of grains, legumes, pasta, fish, shellfish, poultry and meats.

Culinary Arts – Senior

1. Take HSOP courses on RCSJ's campus for a discounted fee.
2. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
3. Take CP or Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.

Baking and Pastry Arts Track

Baking & Pastry Arts I (Weight 2) Freshman

15 credits

This course is designed to teach the fundamentals and principles of baking. Emphasis will be placed on safety and sanitation in the kitchen, ingredient functions, mixing methods, weights and measures, bakeshop math, terminology, and equipment use. Topics covered will include history of the baking profession, knife skills, cookies, quick breads including fritters, pancakes and waffles.

Baking & Pastry Arts II (Weight 2) Sophomore

15 credits

This year is a continuation and reinforcement of fundamentals and principles of Baking & Pastry Arts Specialization I. This year will focus on commercial baking and production, giving the students a real life opportunity to see what it is like to work in a bakery. Topics will include assembly and baking of pies, tarts, fruit fillings, custards, yeast doughs (breads & doughnut) cake mixing, baking and icing types.

Baking and Pastry Arts III (Weight 2) Junior

15 credits

Junior year is opportunities for students to further enhance their skills that were acquired in Baking & Pastry Arts I and II. Students will be afforded the time to concentrate on particular areas of interest while refining their skills. The focus of this year's topics are Frozen & fruit desserts, chocolates, dessert presentation, sugar techniques and basic syrups and cream sauces will be the topics covered in their junior year.

Baking and Pastry Arts – Senior

1. Take HSOP courses on RCSJ's campus for a discounted fee.
2. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
3. Take CP or Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.

Course of Study Required for the Academy of Engineering
School Year 2023-2024

Freshman

Introduction to Engineering	5 credits
Microsoft Office & Digital Literacy	5 credits
CP or Honors English I	5 credits
CP or Honors US History I (first semester)	5 credits
CP or Honors US History II (second semester)	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Science	5 credits
CP or Honors Spanish I or Italian I	5 credits
Fitness for Life I	5 credits

Sophomore

College Level Engineering Clinic I	7.5 credits
Engineering Technology	7.5 credits
CP or Honors English II	5 credits
CP or Honors Level Mathematics (first semester)	5 credits
CP or Honors Level Mathematics (second semester)	5 credits
CP or Honors Lab Chemistry	5 credits
CP or Honors Spanish II, Italian II or Latin II	5 credits
Fitness for Life II	5 credits

Junior

College Level Digital Electronics for Engineers	7.5 credits
College Level 3D Modeling – CADD	7.5 credits
CP or Honors Lab Biology	5 credits
CP or Honors English III	5 credits
CP or Honors Mathematics	5 credits
CP, Honors or College Level World History	5 credits
Financial Literacy or Performing Arts or World Lang III	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits

Senior

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
Financial Literacy or Performing Arts or World Language IV or Electives	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future.

Academy of Engineering – Freshman

Introduction to Engineering (Weight 2)

5 credits

This course prepares students to understand and apply technological concepts and processes that are the cornerstone of the high school engineering education program. Students study the nature and technological issues of the designed world. Students engage in group and individual activities where they develop innovations, design, fabricate, and engineer practical solutions to a variety of problems using a selection of technologies including robotics, 3D printing and other advanced manufacturing technologies. Technology content, resources, and laboratory/classroom activities allow students to apply science, mathematics, and other school subjects in authentic situations.

Microsoft Office & Digital Literacy (Weight 1)

5 credits

This course teaches the relevant computer concepts and skills needed in today's digital world. You'll learn practical, "real world" skills that can be applied on the job or in the classroom. From basic computer skills to file management and digital citizenship; students will gain a strong foundation before venturing into the world of word processing and spreadsheets and slideshow presentations using Word, Excel, and PowerPoint. This class also prepares the students for the Microsoft Office Specialist: Associate Certification which could lead to college credit for Computer Literacy.

Academy of Engineering – Sophomore

Engineering Technology (Weight 2)

7.5 credits

Students build skills for success through research, experiments, and challenges that incorporate science, technology, engineering, and math concepts. Engineering Technology introduces students to a variety of different technologies. They gain experience with using measurement tools and instruments, and perform experiments with electrical circuits, mechanical, and fluid systems. The units of the class include: Alternative Energy, Architectural Design, Construction Technology, Environmental Technology, Manufacturing Technology, Materials Science, Robotics, and Automation and Biotechnology

College Level Engineering Clinic I (Weight 4)

7.5 credits

Engineering Clinic is the first of an eight-course series through Rowan College of South Jersey and Rowan University. This course presents an introduction to Engineering, communication, and measurement through application problems drawn from engineering disciplines. All learning is active and hands-on and includes topics such as technical communication formats, basic engineering software, an introduction to design, measurement, and engineering problem solving.

****Must meet college Placement Test Exemption (see page 9).***

Academy of Engineering – Juniors

College Level Digital Electronics for Engineers (Weight 4)

7.5 credits

This is an introductory course in digital electronics in which the basic concepts in digital electronics will be covered to include binary system, Boolean algebra, binary arithmetic, basic logic gates, combinational logic circuits analysis and design, flip-flops, sequential circuits analysis and design, digital to analog and analog to digital conversions. Completion of a term project will be required. Laboratory work supports lecture topics. ****Must meet college Placement Test Exemption (see page 9).***

College Level 3D MODELING –CADD I (Weight 4)

7.5 credits

Learning 3D design is an interactive process. Students learn best when they can explore the practical applications of the concepts that they learn. This course has many activities and exercises that enable students to put design concepts into practice. Students create their ideas such as artificial heart components, extreme sports equipment, hip replacement parts, robotic arm components, musical instruments and their parts as well as many others. Ideas become reality in this course as some of these items can be produced in the prototyping lab. One of the goals of the class is to have students pass the SolidWorks CSWA Certification which allows them to work as an engineering assistant/CAD technician. ** Must meet college Placement Test Exemption (see page 9).*

Academy of Engineering – Seniors

Engineering students may choose the following senior options:

3. Take HSOP courses on RCSJ's campus for a discounted fee.
4. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
5. Take CP or Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.

Course of Study Required for the Academy of Finance & Business Management
School Year 2023-2024

Freshman

Introduction to Financial Services	5 credits
Applied Finance	5 credits
Microsoft Office & Digital Literacy	5 credits
CP or Honors English I	5 credits
CP or Honors US History I	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Science	5 credits
CP or Honors Spanish I or Italian I	5 credits
Fitness for Life I	5 credits

Sophomore

College Level Principles of Marketing I	5 credits
Entrepreneurship	5 credits
Securities and Insurance	5 credits
CP or Honors English II	5 credits
CP or Honors US History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
CP or Honors Spanish II, Italian II, Latin II	5 credits
Fitness for Life II	5 credits

Junior

College Level Accounting I	5 credits
College Level Accounting II	5 credits
College Level Introduction to Economics	5 credits
CP or Honors English III	5 credits
CP, Honors or College Level World History	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors or Lab Biology	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
Performing Arts or World Language III	5 credits

Senior

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
Financial Literacy or Performing Arts or World Language IV or Electives	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future.

ACADEMY OF FINANCE & BUSINESS MANAGEMENT

Academy of Finance & Business Management - Freshman

Introduction to Financial Services (Weight 2)

5 credits

This course introduces students to all phases of a business curriculum. The major topics discussed include economics, entrepreneurship, marketing, finance, and management.

Applied Finance (Weight 3)

5 credits

In Applied Finance, students learn about the legal forms of business organization and grasp the pros and cons of business ownership forms. Students continue to develop an understanding of profit and distinguish this measure of business success from cost and revenue. Students learn about various financial analysis strategies while they evaluate financial documents. They learn the three most common methods by which businesses raise capital—stocks, bonds, and short-term financing.

Microsoft Office & Digital Literacy (Weight 1)

5 credits

This course teaches the relevant computer concepts and skills needed in today's digital world. You'll learn practical, "real world" skills that can be applied on the job or in the classroom. From basic computer skills to file management and digital citizenship; students will gain a strong foundation before venturing into the world of word processing and spreadsheets and slideshow presentations using Word, Excel, and PowerPoint. This class also prepares the students for the Microsoft Office Specialist: Associate Certification which could lead to college credit for Computer Literacy.

Academy of Finance and Business Management - Sophomore

College Level Principles of Marketing (Weight 4)

7.5 credits

The marketing function is at the managerial level. Topics discussed include methods, trends, and problems involved in research, development, and distribution of goods and services from the producer to the consumer. Emphasis is on product strategy, pricing problems, channels of distribution, promotion, and the study of consumer and marketing behavior. ****Must meet college Placement Test Exemption (see page 9).***

Entrepreneurship (Weight 3)

5 credits

This course is designed to prepare students to become independent business owners. It begins from the premise of creating and owning an enterprise. It stresses starting from scratch, problem solving and decision-making, formulating procedures and systems, and charting one's own course.

Securities and Insurance (Weight 2)

2.5 credits

This course focuses on the front office operation as well as the operations of a securities firm. In addition, the course introduces the student to all phases of the insurance industry including sales, service, and terminology and risk management.

Academy of Finance and Business Management – Junior

College Level Accounting I (Weight 4)

5 credits

This course provides an understanding of the fundamental principles underlying basic accounting theory and establishes a basis for subsequent accounting courses. Extensive coverage is given to accounting cycles for services and merchandising businesses. ****Must meet college Placement Test Exemption (see page 9).***

College Level Accounting II (Weight 4)**5 credits**

This course is a continuation of Accounting I, it will provide a broader foundation and utilization of accounting principles. Extensive coverage is given to problems pertaining to partnerships and corporations. ****Must meet college Placement Test Exemption (see page 9).***

College Level Introduction to Economics (Weight 4)**5 credits**

This course introduces basic principles of economics and is for students who plan to take no other economics principles courses. It covers capitalism, scarcity, supply and demand gross national product, inflation, unemployment, the Federal Reserve System, monetary and fiscal policies and price determination under varying degrees of competition. Current economic issues are also discussed. ****Must meet college Placement Test Exemption (see page 9).***

Academy of Finance and Business Management – Senior**Finance and Business Management students may choose the following senior options:**

1. Take HSOP courses on RCSJ's campus for a discounted fee.
2. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
3. Take CP or Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.

Course of Study Required for the Academy of Health Sciences
School Year 2023-2024

Freshman

Microsoft Office & Digital Literacy	5 credits
Global Health	5 credits
Health Careers Exploration	5 credits
Fitness for Life I	5 credits
CP or Honors English I	5 credits
CP or Honors US History I	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Biology	5 credits
CP or Honors Spanish I or Italian I	5 credits

Sophomore

College Level Medical Terminology	7.5 credits
College Level Biomedical Ethics	7.5 credits
Fitness for Life II	5 credits
CP or Honors English II	5 credits
CP or Honors US History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
CP or Honors Spanish II, Italian II or Latin II	5 credits

Junior

College Level Anatomy and Physiology I	5 credits
Medical Assistant Certification	5 credits
College Level Nutrition	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
CP or Honors English III	5 credits
CP, Honors or College Level World History	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Biology	5 credits
Financial Literacy or Performing Arts or World Lang III	5 credits

Senior

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
Financial Literacy or Performing Arts or World Language IV or Electives	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future.

Academy of Health Sciences

Academy of Health Sciences - Freshman

Health Careers Exploration (Weight 2)

5 credits

Health Careers Exploration is a course designed to introduce students to a broad spectrum of health careers. The course covers careers from the five pathways: diagnostic services, therapeutic services, health informatics, support services, and biotechnology research and development. For each career they study, students examine the main tasks and challenges of professionals in that career, the treatments they administer, and the interaction those professionals have with other professionals. Students learn about the educational requirements and the employment and salary outlook for each career, and they evaluate how their own skills, abilities, and interests align with different careers.

Global Health (Weight 2)

5 credits

Global Health introduces students to public health on a global scale. Students learn what disease is and investigate how it impacts world populations. By studying different societies, they learn about the relationship between health and socioeconomic development. Students learn how environmental, nutritional, and behavioral risk factors jeopardize health. And then they learn how communities, the government, and cooperative global efforts can intervene to improve health.

Microsoft Office & Digital Literacy (Weight 1)

5 credits

This course teaches the relevant computer concepts and skills needed in today's digital world. You'll learn practical, "real world" skills that can be applied on the job or in the classroom. From basic computer skills to file management and digital citizenship, students will gain a strong foundation before venturing into the world of word processing and spreadsheets and slideshow presentations using Word, Excel, and PowerPoint. This class also prepares the students for the Microsoft Office Specialist: Associate Certification which could lead to college credit for Computer Literacy.

Academy of Health Sciences - Sophomore

College Level Medical Terminology (Weight 4)

7.5 credits

This course is designed to assist the student in mastery of the terms, words, phrases and symbols which describe the human body in its various states of health and disease, as well as the proper anatomical terms for each of the body parts. Terminology regarding diagnosis, surgical procedures and pharmacological preparations will be presented. The depth and scope of this course will meet the needs of students in health technologies and in business departments. ****Must meet college Placement Test Exemption (see page 9).***

College Level Biomedical Ethics (Weight 4)

7.5 credits

This course is designed to introduce the student to the classic and contemporary methods and theories of bioethics and to use those concepts to analyze and explore a variety of current biomedical and health-care related issues. ****Must meet college Placement Test Exemption (see page 9).***

Academy of Health Sciences - Junior

College Level Anatomy and Physiology I (Weight 4)

5 credits

This course presents a comprehensive study of the structure and function of the gross and microscopic organization of the human body. Emphasis is placed on the integumentary, skeletal, muscular, and nervous systems. Laboratory experiences include computer assisted instruction and experimental labs which reinforce contemporary scientific concepts. ****Must meet college Placement Test Exemption (see page 9).***

College Level Nutrition (Weight 4)

5 credits

This course provides students with basic nutrition information which can be incorporated into daily life. Topics include explorations of the controversies and myths concerning food, diet, and weight control. ****Must meet college Placement Test Exemption (see page 9).***

Medical Assistant Certification (Weight 3)

5 credits

The Medical Assistant has a variety of job responsibilities inclusive of medical and administrative tasks depending on State Law. Some common tasks of a MAC include: taking patient's history, preparing an examination room, assisting physicians during examinations, preparing and transporting specimens, filing and front desk responsibilities. Since a Medical Assistant works with the public, appearance and respect for confidentiality is important. A certification test is taken at the end of this course, if students are successful, they will have opportunities to gain entry level employment or structured learning experiences during their senior year.

Academy of Health Sciences - Senior

Academy of Health Sciences students may choose the following senior options:

4. Take HSOP courses on RCSJ's campus for a discounted fee.
5. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
6. Take CP or Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.

Course of Study for Academy of Performing Arts
School Year 2023-2024

Dance Track

Freshman - Dance

Dance I	15 credits
CP or Honors English I	5 credits
CP or Honors U.S. History I	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Science	5 credits
CP or Honors Spanish or Italian I	5 credits
Fitness for Life I	5 credits

Sophomore – Dance

Dance II	15 credits
CP or Honors English II	5 credits
CP or Honors U.S. History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
Fitness for Life II	5 credits
Elective (World Language, Financial Literacy, or Elective)	5 credits

Junior - Dance

Dance III	7.5 credits
College Level Fundamentals of Jazz Dance	7.5 credits
CP or Honors English III	5 credits
CP, Honors, or College Level World History	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Biology	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
One Elective (World Language, Financial Literacy, or Elective)	5 credits

Senior – Dance

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
Financial Literacy or Performing Arts or World Language IV or Electives	5-30 credits

Drama Track

Freshman - Drama

Ensemble Acting/Theater History I/Intro Productions	15 credits
CP or Honors English I	5 credits
CP or Honors U.S. History I	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Science	5 credits
CP or Honors Spanish I or Italian I	5 credits
Fitness for Life I	5 credits

Sophomore – Drama

Acting Technique/Theater History II/Production II	7.5 credits
College Level Living Theater	7.5 credits
CP or Honors English II	5 credits
CP or Honors U.S. History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
Fitness for Life II	5 credits
Elective (World Language, Financial Literacy, or Elective)	5 credits

Junior - Drama

Intermediate Acting & Theater Hist III/Prof Dev & Prod III	15 credits
CP or Honors English III	5 credits
CP, Honors, or College Level World History	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Biology	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
Elective (World Language, Financial Literacy, or Elective)	5 credits

Senior – Drama

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
Financial Literacy or Performing Arts or World Language IV or Electives	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future.

Dance Track - Freshman

Dance I (Weight 1)

15 credits

This course is designed for the serious minded individual who wishes to fully explore their artistic discipline. The goal of the program is to introduce students, with a proficient dance background, to a variety of dance disciplines (Ballet I, Modern Dance I, Rhythmic Concepts/Jazz Dance I and Dance History I) and equip them with a high degree of technical proficiency in all of these disciplines. It is our intent to instill a solid work ethic (sense of professionalism) in our students, and provide them with the business acumen and scientific base of knowledge necessary for success in the dance field.

Dance Track - Sophomore

Dance II (Weight 1)

15 credits

Students will be able to expand on their understanding of the artistic discipline of dance. The goal of the program is to further enhance the students, with a proficient dance background, to a variety of dance disciplines (Ballet, Modern dance, Rhythmic concepts and Dance History) and equip them with a high degree of technical proficiency in all of these disciplines. They will expand on their understanding of the use of the common elements of time, space, and energy as they pertain to all dance forms. Finally, they will be able to demonstrate by example a working knowledge of applied

anatomy and kinesiology. In addition, students will explore the history of modern dance from its beginnings within the early 20th Century to today's current trends in post-modern dance.

Dance Track - Junior

Dance III (Weight 2)

7.5 credits

The students will continue to explore the primary disciplines of Ballet, Modern, and Jazz Dance/Rhythmic Concepts in a holistic way. The emphasis of the dance training will be on anatomically correct movement as it applies to dance technique. They will expand on their understanding of the use of the common elements of time, space, and energy as they pertain to all dance forms. In addition, students will connect the history of Classical Ballet, Contemporary Ballet, Modern Dance, Post-Modern Dance, Jazz Dance, Theater Dance, and Vernacular Dance to gain insight of how dance affects our society. The students will explore the compositional devices used in developing choreography. They will focus on the elements of dance (space, time, energy, and shape) as a place to begin the process of making dances. The course will conclude in a collaborative work involving all of the students as well as the instructor.

College Level Fundamentals of Jazz Dance (Weight 4)

7.5 credits

Fundamentals of Jazz introduces students to a comprehensive style and technique rooted in traditional jazz dance and to a variety of movement concepts of contemporary jazz dance. The concepts and techniques covered in this class reflect the evolution of jazz dance in America, and evolution due in great part to various music, cultural and social dance influences throughout its history. ****Must meet college Placement Test Exemption (see page 9).***

Dance Track – Senior

1. Take HSOP courses on RCSJ's campus for a discounted fee.
2. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
3. Take CP or Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.

Drama Track - Freshman

Drama – Ensemble Acting/Theater History I/Intro Productions (Weight 1) 15 credits

Incoming freshmen will be introduced to the foundations necessary for a career pathway in stage, film, or television. In this fast paced, hands on program, we will begin to demystify a career in the arts and equip our students with the skills to pursue this field either at the collegiate or professional level. Through improvisation and basic acting technique, students will develop imagination, spontaneity, creative risk-taking, responsiveness, ensemble skills, and problem solving. History of the theatre exposes students to the script analysis of classical works and leads them to an understanding of the development of theatre. Professional Development introduces technical theatre, commercial acting, production, dramaturgy, and dramatic criticism. We strive to create well-rounded artists who are as comfortable performing on stage in improvisation, classical drama, or musical theatre.

Drama Track– Sophomore

Drama – Acting Technique/Theater History II/Production II (Weight 1) 7.5 credits

Sophomore drama majors will build on the foundations necessary to clarify their career path in the theatre. They will explore audition technique through cold readings and prepared monologues. Students will be introduced to the Stanislavski acting technique and use of acting choices. They will

continue to develop understanding of the mechanics of vocal production and the importance of relaxation techniques for the actor's instrument. In addition, students will experience extensive scene work preparing them to fully engage an audience in a production of one act plays. Students will also gain a historical perspective on Neoclassical Theater, Realism, Naturalism, Romanticism, and Melodrama with a review of Elizabethan Theater. They will participate in practical technical experiences in such areas as stage management, prop management, and costume management and gain a deeper understanding of various theater positions such as director, assistant director, and costume, scenic, and lighting designers. In addition, students will study musical theater and engage in writing and taping television scripts.

College Level Living Theater (Weight 4)

7.5 credits

As long as humans walk the earth, theatre will survive. Even as our entertainment options get more high-tech, we still love crowding together with complete strangers in dark windowless rooms and watching fellow human beings tell stories and "play pretend" in front of our eyes. How is this possible? What keeps this ancient (and underfunded) art form alive? In this course we'll look at theatre from the perspective of those who create it and attempt to answer the following questions:

- Why does live theatre survive in an increasingly digital age?
- How do all the individual theatre artists create a production and why do they do it?
- What can we apply from the craft of theatre to our non-theatre endeavors?
- ***Must meet college Placement Test Exemption (see page 9).**

Drama Track – Junior

Prof Dev & Prod III/Intermediate Acting & Theater Hist III (Weight 1)

15 credits

In order to be prepared for the ever changing, competitive job market, Junior drama students will broaden their understanding of career pathways in the field of Performing Arts. In Intermediate Acting we will strive to deepen their knowledge of character creation through advanced scene study and performance in a main stage production. Students will synthesize a variety of acting methods into their performance such as the Meisner, Hagen, or Strasberg technique. We will work to increase their physical awareness by utilizing Laban, Yoga, or Viewpoints. Building upon past vocal work, we will introduce basic Linklater and Lessac work. In history of the theatre, students will focus on American works, reading and analyzing classic and contemporary American writers. Professional Development and Production examines a variety of aspects of theatre such as design and technical theatre and directing. Furthermore, they will put this learning to the test by mounting a full production, performing in various scenes, monologues, and acting for the camera experiences.

Drama Track – Senior

1. Take HSOP courses on RCSJ's campus for a discounted fee.
2. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
3. Take CP or Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.

Course of Study Required for Academy of Transportation Technology
School Year 2023-2024

Freshman

Power Equipment Tech	15 credits
CP or Honors English I	5 credits
CP or Honors U.S. History I	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Science	5 credits
Fitness for Life I	5 credits
CP or Honors Spanish I or Italian I	5 credits

Sophomore

Automotive Technology Specialization I	15 credits
CP or Honors English II	5 credits
CP or Honors U.S. History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
Fitness for Life II	5 credits
One Elective (World Language, Performing Arts or Financial Literacy)	5 credits

Junior

Program Specialization (<i>continuation from Sophomore year</i>):	15 credits
Small Engine Level III	
Automotive Technology Specialization II	
Collision Repair Technology Specialization II	
CP or Honors English II	5 credits
CP, Honors or College Level World History	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors or Lab Biology	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
One Elective (World Language, Performing Arts, or Financial Literacy)	5 credits

Senior

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
Financial Literacy or Performing Arts or World Language IV or Electives	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future.

ACADEMY OF TRANSPORTATION TECHNOLOGY

AUTOMOTIVE TECHNOLOGY – Freshman

Power Equipment Technology (Weight 1)

15 credits

Students will be acquainted with the Power Equipment businesses, and gain basic knowledge and skills needed to work in the industry. Power Equipment Technology students will learn basic theory, operation, and repair procedures of systems used by small engine manufacturers. This course will cover basic safety, tool usage, measuring devices, engine and electrical system fundamentals and service.

AUTOMOTIVE TECHNOLOGY (Sophomore)

Automotive Technology Specialization I

15 credits

The first year of Automotive Specialization consists of four major ASE areas: Automotive Braking Systems, Automotive Chassis Systems, Engine Performance and Repair, and Specialized Electronic Training.

Automotive Braking Systems: Theory, Operation and Repair (Weight 2)

The automotive braking systems course will prepare the student to be familiar with standard, four-wheel disc, and anti-lock braking systems. The student should be able to service, diagnose, and repair all of these braking systems. The student should be able to explain the hydraulic and mechanical principles of a brake system. This course also contains the diagnosis and repair of traction control and stability control systems.

Automotive Chassis Systems: Theory, Operation and Repair (Weight 2)

The automotive chassis systems course will prepare the student to service tapered roller bearings and service steering systems. The student will be able to service, diagnose and repair front suspension systems and rear suspension systems. The student will be able to perform pre-alignment inspections and adjust wheel alignment including four-wheel alignments to industry specs.

Engine Performance & Repair (Weight 2)

The automotive engine repair course will familiarize the student with engine operating principles and disassembly and diagnostic procedures. The student will be able to diagnose and repair lubrication systems, cooling systems, and cylinder blocks. Training will also include crankshafts, bearings, pistons, connecting rods, camshafts, and timing components. The student should be able to assemble cylinder heads, air induction, and exhaust systems. The performance part of this course will include ignition systems, fuel injection systems, turbo charging, and electronic engine controls. The final part of this course will be automotive emissions diagnosis and repair.

Specialized Electronic Training (SET) (Weight 2)

After completing the Specialized Electronic Training, the student will be familiar with basic electrical components and systems, test equipment, types of faults, protection devices, and types of circuits. The student should be able to determine the wire gauge needed, diagnose

causes of battery drain, interpret wiring diagrams, find shorts and grounds, and inspect, test, and replace circuit protection devices. The student will be able to list the different electrical systems and describe common electrical tools and test equipment.

AUTOMOTIVE TECHNOLOGY – Junior

Automotive Technology Specialization II

15 credits

The second year of Automotive Specialization consists of the four ASE areas: Manual Drive Train and Axles, Automatic Transmission and Transaxle, Automotive Heating and Air Conditioning Systems, and Advanced Engine Performance.

Manual Drive Train & Axles (Weight 2)

The manual drive train course will familiarize the student with clutch diagnosis and repair, transmission diagnosis and repair, transaxle diagnosis, and repair and drive (half) shaft and universal joint diagnosis and repair. Also included in this course are rear axle diagnosis and repair, and four-wheel-drive components diagnosis and repair.

Automatic Transmission & Transaxle (Weight 2)

The automotive transmission/transaxle course will familiarize the student with automatic transmission theory and operation. The course will include general transmission/transaxle diagnosis and transmission/transaxle maintenance adjustment. In-vehicle transmission/transaxle repair along with off-vehicle transmission/transaxle repair. Overhaul procedures are included in this course.

Automotive Heating & A/C Systems (Weight 2)

The heating and air conditioning system course will prepare the student to service operating systems and related controls. Refrigerant recovery, recycling, and handling is a requirement. Students will be familiar with air conditioning system diagnosis and repair, and refrigeration system component diagnosis, and repair. The course will also contain heating and cooling system diagnosis and repair.

Advanced Engine Performance (Weight 2)

The Advanced Engine Performance course is the final course of this curriculum. This course will familiarize the student with general power train diagnosis, computerized engine controls diagnosis, ignition system diagnosis, fuel systems and air induction system diagnosis, and I/M Failure diagnosis.

Small Engine Level III (Weight 2)

15 credits

This course prioritizes two & four-stroke technologies used in small engine industries. Students will investigate, in detail, the theories and design technologies as they pertain to systems common to small engines. Students will have the opportunity to earn EETC Two-Stroke and Four-Stroke Industry Certifications.

Structural Analysis & Damage Repair

The Structural Analysis & Damage Repair II course will teach the students the use of measuring systems used to perform full analysis on structural damage. The course will then go on to show how to make damage analysis, full panel replacements, frame rail repair and replacement, restoring corrosion protection and the selection of and understanding of various types of joints used in replacing panels using a welder.

Non-Structural Analysis and Damage Repair

The Non-Structural Analysis and Damage Repair II course will teach the students the use of all hand and power tools needed for all of the following tasks. The student will learn to remove and install quarter panels, door skins, fender hoods and deck lid replacement, trim and hardware, as well as glass and hardware. This course will also include movable glass, quarter panel replacement, door skin, and trim and hardware replacement.

Mechanical & Electrical Systems

The Mechanical & Electrical Systems II course will teach the student to diagnose, remove and replace electrical and electronic systems such as power windows, power seats, power sunroofs, electronic sensors, wiring and connectors. Analyses of air conditioning refrigerants and oil will also be covered as well as removed, replacement and repair of air conditioning systems and air bag systems.

Painting & Refinishing

The Painting & Refinishing II course will teach the students to properly mix all paints and primers to manufacturer specifications. They will learn the proper application of base-coat clear-coat systems such as single stage, two stage and 3 stage systems, full panel and spot panel blending techniques. They will also learn the sanding and buffing techniques for the maximum shine of the finished project.

Automotive/Collision/Small Engine – Senior

1. Take HSOP courses on RCSJ's campus for a discounted fee.
2. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
3. Take CP or Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.

ENGLISH

Honors English I (Weight 3)

5 credits

Honors English I introduces the student to a variety of literacy genres: short story, poetry, nonfiction, drama, Shakespearean tragedy, epic and novel. Students must learn to read and analyze literature well. Students will be expected to write well and analyze what each reads well. The teachers expect writing that focuses on organization, clarity, logic and mechanics with a creative flair. Students will fine tune their critical thinking, research, media, and public speaking skills. A comprehensive research project is just one of the projects expected in this class. Throughout the course, preparations for the PSAT/SAT and state assessment will be ongoing. An interdisciplinary approach to teaching is an integral part of the curriculum. Students will complete an independent reading project. ****Must meet Honors level requirements (see page 9).***

CP English I (Weight 2)

5 credits

C.P. English I introduces the student to a variety of literary genres: short story, poetry, nonfiction, drama, Shakespearean tragedy, epic and novel. The writing component focuses on organization, clarity, logic and mechanics while encouraging creativity. Critical thinking, research, and public speaking skills will also be developed. Throughout the course preparations for the PSAT/SAT and state testing will be ongoing. An interdisciplinary approach to teaching is an integral part of the curriculum. Students will complete an independent reading project.

English I – (Weight 1)

5 credits

In English I the student will learn and develop basic writing and literary skills. The writing skills that are stressed are narrative, character sketches, responses to literature, comparisons and contrasts, opinion statements, descriptive, persuasive and expository. Additionally, all students will engage in cross-curricular writing and project-based learning. The literary genres that will be studied this semester are short story, poetry, drama, novel and nonfiction. Twenty-first century critical thinking skills are also stressed. Preparation for standardized testing, vocabulary development and grammar will be covered. Consideration is given to students' learning styles. Classroom serves as a small group learning environment. Modifications and accommodations are made in accordance with students' IEPs. Supplemental materials are also available.

Honors English II (Weight 3)

5 credits

Honors English II will study genres of poetry, science fiction, opinion editorials and rhetoric. Expect writing that focuses on organization, clarity, log and mechanics with a creative flair. Students will fine tune their critical thinking, research, media, and public speaking skills. Writing assignments throughout the course will be literature based and serve to reinforce prewriting, writing, and revising skills. More in-depth research projects and specific oral/aural activities will be assigned. Students will complete a comprehensive research assignment. Each year students must improve their reading, writing, thinking, speaking, presenting, listening, and media awareness skills. Throughout the course preparations for the PSAT/SAT and state assessment will be ongoing. An interdisciplinary approach to teaching continues to be an integral part of the curriculum. ****Must meet Honors level requirements (see page 9).***

CP English II (Weight 2)**5 credits**

C.P. English II will study genres of poetry, science fiction, opinion editorials and rhetoric. Writing assignments throughout the course may be literature based and serve to reinforce prewriting, writing, and revising skills. More in-depth research projects and specific oral/aural activities will be assigned. Students will complete a research assignment. Throughout the course preparations for the PSAT/SAT and state testing will be ongoing. An interdisciplinary approach to teaching continues to be an integral part of the curriculum.

English II – (Weight 1)**5 credits**

English II reinforces and further develops reading, writing and literary skills. The writing skills that are stressed are the principles of effective expression, logical development of an idea, effective sentence and paragraph structure, and different types of writing. In addition to the traditional literature-based writing component, students will engage in cross-curricular, practical, and routine writing. Consideration is given to students' learning styles and implemented to meet the needs of every learner. This classroom serves as a small group learning environment. Modifications and accommodations are made in accordance with students' IEPs. Supplemental materials are also available.

Honors English III (Weight 3)**5 credits**

Honors English III focuses on the study of American literature. This course emphasizes the developmental skills necessary to enhance the students' abilities to read critically and to understand not only the literature, but also the history that helped shape the country. Literacy skills include the structure of the novel, narrative, play, and rhetoric. In this course students will focus on strengthening skills in public speaking, critical thinking, grammar, writing, research, vocabulary and test taking strategies. In addition, students will analyze and practice writing narrative, expository, and persuasive essays including delivering a speech. Course requirements include comprehensive research activities and independent readings. Each year students must improve their reading, writing, thinking, speaking, presenting, listening and media awareness skills. Throughout the course preparations for the SAT and state assessment will be ongoing. An interdisciplinary approach to teaching continues to be an integral part of the curriculum. ****Must meet Honors level requirements (see page 9).***

CP English III (Weight 2)**5 credits**

C.P. English III focuses on the study of American literature. This course emphasizes the developmental skills necessary to enhance the students' abilities to read critically and to understand not only the literature, but also the history that helped shape the country. Literacy skills include the structure of the novel, narrative, play, and rhetoric. In this course students will focus on strengthening skills in public speaking, critical thinking, grammar, writing, research, vocabulary and test taking strategies. In addition, students will analyze and practice writing narrative, expository, and persuasive essays including delivering a speech. Course requirements include research activities and independent readings. Throughout the course preparations for the SAT and state assessment will be ongoing. An interdisciplinary approach to teaching continues to be an integral part of the curriculum.

English III – (Weight 1)**5 credits**

English III focuses on the study of American literature. The students will continue to reinforce and further develop reading, writing and literary skills. The writing skills that are stressed are the principles of effective expression, i.e., the presentation and logical development of an idea, effective sentence and paragraph structure, and different types of writing. Preparation for standardized testing, vocabulary development, and grammar are also covered. Consideration is given to students' learning styles and implemented to meet the needs of every learner. This classroom serves as a small group learning environment. Modifications and accommodations are made in accordance with students' IEPs. Supplemental materials are also available.

College Level English Composition 101 (Weight 4)**5 credits**

This course provides students with extensive guided experience in writing essays. The course emphasizes the writing process; critical reading and thinking skills; and the concepts of audience, purpose and form. Attention is devoted to responsible research skills and the basic techniques of MLA documentation. **Must meet college Placement Test Exemption and Honors level requirements (see page 9).*

Honors English IV (Weight 3)**5 credits**

Honors English IV focuses on the study of English literature as well as the historical background from the Anglo-Saxon period through the 20th Century. Selected masterpieces from world literature may be also included. The writing component remains literature based and will be further strengthened through a variety of writing assignments. Course requirements include more critical research activities and a research assignment. Each year students must improve their reading, writing, thinking, speaking, presenting, listening, and media awareness skills. An interdisciplinary approach to teaching continues to be an integral part of the curriculum. Students will complete an independent study project. **Must meet Honors level requirements (see page 9).*

CP English IV (Weight 2)**5 credits**

Every genre of literature has its own conventions for expressing emotions, perceptions, information and biases. CP English IV students will explore various selections in print and electronic media that cover a full range of genres, forming a basis for critical thinking and creative problem solving. Existing composition and grammar skills will be reinforced through directed writing instruction. Students will learn the art of effective communication, the skill of sound decision making, and to accept and value views other than their own. As students explore many texts and identify the roles that language plays, they will understand that language is not only a means of communication but also a means to transfer specific knowledge about a particular subject. An interdisciplinary approach to teaching will be an integral part of the curriculum to provide students with enduring and relevant skills that meet the demands and rigor of current trends applicable to 21st century citizens. Students will complete an independent study project.

English IV – (Weight 1)**5 credits**

English IV follows the development of British literature from the Anglo-Saxon period through the Twentieth Century. The students will continue to develop their knowledge of literary terms and genres as well as their skills in speaking, listening, writing, critical thinking and vocabulary. Attention will be given to reading and writing across the curriculum. Twenty-first century critical thinking skills are also stressed. Consideration is given to students' learning styles. Classroom serves as a small group learning environment. Modifications and accommodations are made in accordance with students' IEPs. Supplemental materials are also available.

FITNESS FOR LIFE

All students are required by state law to take a course in Physical Education each year of attendance in High School. Students may only be excused from participation (alternate assignments will be given) in these classes if documentation is provided by a physician.

NOTE: Students will be expected to dress properly for Physical Education classes, consistent with approved procedures and guidelines.

Fitness for Life I (Weight 1)

5 credits

Fitness for Life teaches a proactive approach to health and wellness. The curriculum identifies and establishes those behaviors that are necessary to lead a healthy lifestyle now and to acquire the decision-making tools needed to choose healthy behaviors throughout each stage of life. The topics embedded in the Fitness for Life course of study include: an introduction to health and wellness, the ability to make responsible decisions, physical fitness and exercise programs (based on Fitness Gram), nutrition principles, weight management, eating disorders, risk for heart disease and community health opportunities. Students are active in a variety of exercise modalities that promote motivational, fun, and functional fitness.

Fitness for Life II (Weight 1)

5 credits

Fitness for Life II continues to emphasize the importance of exercise and the myriad of modalities that can aid students in achieving a consistent exercise program. Both health and skill related fitness components are taught and experienced. Fitness Gram continues to be used as a basis of evaluation and goal setting. Certified instructors offer the New Jersey State defensive driving course. Students have the opportunity to successfully complete the NJ written driver's test in this course.

Fitness for Life III - Lifeguarding (Weight 2)

5 credits

Fitness for Life III continues to reinforce healthy lifestyle choices through theory and practical experience. In addition, the course introduces the student to anatomy and physiology as it applies to exercise science. The skills needed to assess health risk factors and fitness levels are also examined. Fitness Gram is used as a baseline for this examination, but additional methods are considered also. Students will take the American Red Cross Lifeguard certification. The main focus of the course is earning the American Red Cross Professional Rescuer C.P.R and First Aid Certification.

Fitness for Life III - (Weight 1)

5 credits

Fitness for Life III continues to reinforce healthy lifestyle choices through theory and practical experience. In addition, the course introduces the student to anatomy and physiology as it applies to exercise science. The skills needed to assess health risk factors and fitness levels are also examined. Fitness Gram is used as a baseline for this examination, but additional methods are considered also.

Fitness for Life IV (Weight 1)

5 credits

Fitness for Life IV continues to explore and promote lifelong fitness habits through the understanding and application of health and skill related fitness components. Students are assessed through Fitness Gram. Topics addressed in the course include mental and emotional health, the misuse and abuse of drugs, alcohol, and tobacco. Other course topics include family life, sexuality, social life, and communicable and non-communicable diseases.

Fitness for Life III/ IV - Independent Option (Weight 1)

5 credits

Applicable students in their Junior and/or Senior year will have the opportunity to use Independent Fitness to meet their Fitness for Life requirement for graduation. All required coursework will be completed independently and outside the school day. Students must have received a grade of an 84 or higher in Freshman and Sophomore year in order to be eligible for this option. Students **MUST** complete an academic schedule showing their 11th and 12th grade plan to be considered for Independent Fitness. Applying for Independent fitness is **NOT** guaranteed. Only students who provide proof that traditional Fitness will not fit into their schedule due to an academic need will be approved. Students cannot apply for Independent Fitness unless they are taking an academic class that will not fit into their schedule. **Students must apply through the guidance office prior to the June 1, 2023 deadline.**

College Level Physical Fitness/Contemporary Health (Weight 4)

5 credits

This course has two components: It is designed to improve cardiovascular fitness and muscular strength and endurance through participation in various activities (including aerobic exercise, weight training and circuit training) and to provide basic, related health and wellness information. The second part of this course provides students with a background in current health issues. Psychological health, human development, wellness, drug use and abuse, sexuality and family life, personal health, chronic and infectious diseases, environmental health, and consumerism. ****Must meet college Placement Test Exemption (see page 9).***

FAMILY LIFE REQUIREMENT

NJ Administrative Code requires all schools to provide Family Life Education. At the Gloucester County Institute of Technology, this instruction is provided as part of the 9th and 12th grade Fitness for Life curriculum.

MATHEMATICS

Foundations of Algebra I (Weight 1)

5 credits

This course is designed to provide students with the fundamental algebra skills that are necessary to be successful in their high school mathematics career. The students will be introduced to number sense and algebraic thinking, fractions and operations involving fractions, linear functions and inequalities, ratios and proportions, as well as percent and integers. Throughout the course, mathematical concepts will be taught with an emphasis on real/world application, technology, and cross/curricular interaction. Emphasis will be placed on practical math skills. Modifications and accommodations are made in accordance with each student's IEP. Supplemental materials are also available. Students who take this course will be required to take 4 math courses for graduation eligibility.

CP Algebra I (Weight 2)

5 credits

Students in this course will be introduced to algebra through its relationship with science, the environment, social science, and real world scenarios. Topics such as basic math functions, order of operations, data and measurement, probability, ratio and proportions, equations and inequalities, functions and graphs, and open-ended questions will be explored. This developmental course is designed to develop student's technological and problem solving abilities in the 21st century.

Honors Algebra I (Weight 3)

5 credits

This course is the foundation for all courses in advanced mathematical studies and is designed for students who have a solid foundation in basic arithmetic as well as knowledge and understanding of the real number system. Topics include: solving and graphing linear equations, operations with polynomials and exponents, systems of equations, rational and radical functions, probability, and open-ended questions. This developmental course is designed to develop student's technological and problem solving abilities in the 21st century. ****Must meet Honors level requirements (see page 9).***

Geometry – (Weight 1)

5 credits

This course is designed to increase student success with geometry elements including polygons, triangles, circles, and three dimensional solids. The students will be introduced to problem-solving strategies involving spatial sense and geometric properties. Students will develop the mathematical processes of problem solving, communicating, connecting and reasoning to solve problems. Students will be encouraged to apply classroom experiences to real world scenarios. Algebra is a key factor in the class. Consideration is given to students' learning styles. Modifications and accommodations are made in accordance with each student's IEP. Supplemental materials are also available.

CP Geometry (Weight 2)

5 credits

This course will emphasize and focus on in-depth problem solving skills as well as an understanding of important geometric concepts through their connection to real world applications. Topics include: basic geometric tools, reasoning and proof, properties of polygons, triangles and circles, three dimensional solids, and transformations of polygons. This developmental course is designed to develop student's technological and problem solving abilities in the 21st century.

Honors Geometry (Weight 3)**5 credits**

Students will use terms and notations to convey geometric ideas. The course involves the relationship of points, lines, planes, and angles. Three dimensional figures and models are examined and surface area and volume will be explored. Students will be introduced to reasoning in mathematics through constructing formal proofs. Students will also develop congruencies between figures, similarities, areas of circles, polygons, and surface, as well as volumes of solids. This developmental course is designed to develop student's technological and problem solving abilities in the 21st century. ***Must meet Honors level requirements (see page 9).**

Algebra II – (Weight 1)**5 credits**

This course is designed to provide students with comprehensive mathematical instruction that builds upon concepts acquired in Algebra I. The students will be introduced to problem solving strategies to strengthen their skills in number sense, concept and applications, spatial sense, geometry, data analysis, probability, statistics, discrete mathematics, patterns, functions, and algebra. Consideration is given to students' learning styles. Modifications and accommodations are made in accordance with each student's IEP's. Supplemental materials are also available.

Foundations of Algebra II (Weight 1)**5 credits**

Foundations of Algebra II is a continuation of Algebra I. This course is designed to continue to build on algebraic concepts and geometric concepts. Systems of equations, polynomials, trigonometric functions as well as formulas to solve 3-dimensional figures will be explored. An emphasis is placed on real world math activities. Consideration is given to students' learning styles. Modifications and accommodations are made in accordance with each student's IEP's. Supplemental materials are also available.

Integrated Mathematics (Weight 1)**5 credits**

This course is designed to provide students with the fundamental algebra and geometry skills that are necessary to be successful in their high school mathematics career. The students will be introduced to number sense, spatial sense and algebraic thinking. The course is designed to foster a solid understanding of the math needed for a broad range of career programs. The course will require the basic math, algebra, and geometry needed in career programs. This course is only for students who need a third year math course and earned lower than a "B" in Algebra 1 and Geometry and have not taken Algebra II or a higher math course. It is not designed for students whose future goals require higher level math courses. Teacher recommendation is highly suggested for this course.

CP Algebra II (Weight 2)**5 credits**

This course is designed to reinforce and build upon concepts studied in Algebra I. Concepts that are further explored include: the properties of systems of linear equations, matrices, and functions. Topics are evaluated using graphs, tables, and algebraic manipulation. Algebra II also continues to develop students' logic and reasoning in problem solving. Applications in everyday situations are explored. This developmental course is designed to develop student's technological and problem solving abilities in the 21st century.

Honors Algebra II (Weight 3)**5 credits**

Students will be exposed to a more rigorous and challenging approach to Algebra II. Concepts that are further explored include: the properties of systems of linear equations, matrices, and functions. Topics are evaluated using graphs, tables, and algebraic manipulation. Algebra II also continues to develop students' logic and reasoning in problem solving. Applications in everyday situations are

explored. This course is designed for the self-motivated student of mathematics who plans to pursue additional advanced mathematics courses, including Calculus. This developmental course is designed to develop student's technological and problem solving abilities in the 21st century. ***Must meet Honors level requirements (see page 9).**

CP Pre-Calculus (Weight 2)

5 credits

This course will focus on analyzing the graphs and trends of functions. The main topics covered will be polynomial, exponential, logarithmic, rational, radical, and trigonometric functions as well as vectors. Students who wish to continue to Honors Calculus should not enroll in CP Pre-Calculus.

Prerequisite - Successful completion of Honors Algebra II (earned a grade of C or higher) or Successful completion of CP Algebra II (earned a grade of B or higher).

Honors Pre-Calculus (Weight 3)

5 credits

This course will focus on analyzing the graphs and trends of both functions and non-functions. The main topics covered will be polynomial, exponential, logarithmic, rational, radical, and fundamental and analytic trigonometric functions as well as conic sections. It is extremely important that students be aware of the continuity of their education in mathematics. This course is intended to prepare students for Calculus. ***Must meet Honors level requirements (see page 9).**

Honors Calculus (Weight 3)

5 credits

This is an introductory Calculus course. Students who are successful in this course will be prepared to study Calculus at the college level. In this course, students will be introduced to the theories of calculus while applying calculus techniques to solve application problems in a variety of areas. Students should possess a strong math background, especially in the areas of algebra and pre-calculus. Students will explore limits, calculate derivatives, and find anti-derivatives. ***Must meet Honors level requirements (see page 9).**

CL Calculus (Weight 4)

5 credits

This is study of differential calculus and its applications. Topics include differentiation techniques of algebraic and transcendental functions, rates of change, maxima and minima, mean-value theorem and an introduction to integral calculus. ***Must meet college Placement Test Exemption (see page 9).**

Honors Probability and Statistics (Weight 3)

5 credits

This course is designed to explore descriptive statistics, probability, and inferential statistics and includes applications of statistics for students of all career areas. Students will be required to use classroom lessons to build knowledge of how statistics and probability are used in everyday life. This course will be used primarily for students who want to continue an academic career in mathematics, but not through calculus. ***Must meet Honors level requirements (see page 9).**

SCIENCE

Earth Science (Weight 1)

5 credits

Through laboratory experiences, discovery, and classroom presentations, this course approaches earth science from all directions. We will begin with addressing the scientific method and its importance, continuing with an investigation into planet earth's numerous systems. Students will learn of the concepts of plate tectonics, the water cycle, climate vs. weather, human's effect on planet earth, and how all the concepts interrelate to form our dynamic planet. There is ongoing review/reinforcement of key concepts. Consideration is given to students' learning styles.

Modification and accommodations are made in accordance with students' IEPs. Supplemental learning material is also available.

CP Dynamics of Science Systems (Weight 2)

5 credits

This course provides an overview of the basic principles of Conceptual Physics, Chemistry, Earth Science, and the Solar System. This course is designed as a survey course to review the different types of sciences. Students will learn by solving inquiry-based problems, traditional laboratory experiences and class discussions. The course will explore topics that have real life applications and make relationships with students' career path programs.

Honors Lab Chemistry (Weight 3)

5 credits

This course approaches chemistry as a qualitative and quantitative study of the interactions of matter on the subatomic and molecular level. It will begin with the most fundamental of chemical units, the atom. Students will be involved in laboratory research, problem solving, and classroom presentations. Problem solving is essential in defining the intrinsic quantitative nature of chemistry. All students must have a scientific calculator capable of working with exponents. The course is intended for serious and inquisitive students desiring to broaden their knowledge of the physical world. **Must meet Honors level requirements (see page 9).*

CP Lab Chemistry (Weight 2)

5 credits

Through laboratory experiences, discovery, and classroom presentations, this college preparatory course treats chemistry as a qualitative and quantitative study of the interactions of matter on the subatomic and molecular level. It will begin with the most fundamental of chemical units, the atom. Problem solving involving basic algebra will be used to introduce the quantitative nature of chemistry. All students must have a scientific calculator capable of working with exponents.

Lab Chemistry – (Weight 1)

5 credits

Through laboratory experiences, discovery, and classroom presentations, this course treats chemistry as a qualitative and quantitative study of the interactions of matter on the subatomic and molecular level. It will begin with the most fundamental of chemical units, the atom. Problem solving involving basic algebra will be used to introduce the quantitative nature of chemistry. There is ongoing review/reinforcement of key concepts. Consideration is given to students' learning styles. Modification and accommodations are made in accordance with students' IEPs. Supplemental learning material is also available.

Honors Lab Chemistry II (Weight 3)

5 credits

Through inquiry-based problems, traditional laboratory experiences, and classroom presentations, this elective course continues the exploration of chemistry begun in Lab Chemistry. Students will explore solutions, chemical equilibrium, solubility and precipitation, acids and bases, oxidation reduction, thermodynamics, and an introduction to biochemistry. This honors level course is intended for serious and inquisitive students desiring to further their exploration and understanding of chemistry. All students are required to have a scientific calculator capable of handling exponents. Lab Chemistry II is open to all students who have earned a B or higher in Lab Chemistry I. **Must meet Honors level requirements (see page 9).*

Honors Lab Biology (Weight 3)

5 credits

This is a rigorous honors course emphasizing biological research and analysis. The course reviews concepts from life science and moves on to pursue Biology topics in

more depth. The course focuses on ecology, biochemistry, cellular processes, genetics, evolution, current research, and environmental issues. Students will work in small groups to develop their scientific skills through projects and lab investigations. Students are required to take the NJ End of Course exam in May. ****Must meet Honors level requirements (see page 9).***

CP Lab Biology (Weight 2)

5 credits

This is a rigorous college preparatory level course emphasizing biological research and analysis. The course reviews concepts from life science and moves on to pursue Biology topics in more depth. The course focuses on ecology, biochemistry, cellular processes, genetics, evolution, current research, and environmental issues. Students will work in small groups to develop their scientific skills through projects and lab investigations. Students are required to take the NJ End of Course exam in May.

Lab Biology – (Weight 1)

5 credits

This course emphasizes biological research and analysis. The course reviews concepts from life science and moves on to pursue Biology topics in more depth. The course focuses on ecology, biochemistry, cellular processes, genetics, evolution, current research, and environmental issues. Students will work in small groups to develop their scientific skills through projects and lab investigations. There is ongoing review/reinforcement of key concepts. Consideration is given to students' learning styles. Modification and accommodations are made in accordance with students' IEPs. Supplemental learning material is also available. Students are required to take the NJ End of Course exam in May.

Honors Global Systems (Weight 3)

5 credits

This is a rigorous honors course that provides students to the study of the natural world and how it is influenced by human activity. Through lab experiences and class discussion, students will explore the patterns and processes of Earth and how these are affected by nature and human events. Students will use inquiry-based learning to study global problems that our planet is facing today and various efforts to solve these problems, ultimately understanding the need for a sustainable future. ****Must meet Honors level requirements (see page 9).***

CP Global Systems (Weight 2)

5 credits

This is a college preparatory course that studies the natural world and the effects of human activity. Through lab experiences and class discussion, students will explore the various processes of the Earth and how they are impacted by nature and human activities. Students will also study how the impact has a ripple effect on other Earth systems. Students will use inquiry-based learning to study real-life global problems facing our planet and various efforts to solve these problems, ultimately understanding the need for a sustainable future.

Honors Advanced Topics in Biology (Weight 3)

5 credits

This is an honors elective course emphasizing biological research and analysis. The course briefly reviews concepts from life science and moves on to pursue biology topics in more depth. The course focuses on ecology, biotechnology, genetics, evolution, current research and environmental issues, and study skills for science class environments. Students who wish to independently investigate some of their own interests in biology are encouraged to enroll. ****Must meet Honors level requirements (see page 9).***

Honors Lab Physics I (Weight 3)**5 credits**

This is a rigorous honors course that covers elements of physics including: dynamics, kinematics, gravitational force, work and energy, and momentum. Students are expected to demonstrate their understanding of the course objectives through analysis of concepts, application of formulas, and laboratory skills. Students will solve problems and conduct investigations both individually and as members of cooperative groups. All students are expected to have a calculator. **Must meet Honors level requirements (see page 9).*

CP Lab Physics I (Weight 2)**5 credits**

This is a college preparatory level course that covers elements of physics including: dynamics, kinematics, gravitational force, work and energy, and momentum. Students are expected to demonstrate their understanding of the course objectives through analysis of concepts, application of formulas, and laboratory skills. Students will solve problems and conduct investigations both individually and as members of cooperative groups. All students are expected to have a calculator.

Honors Physics II (Weight 3)**5 credits**

Honors Lab Physics II is a continuation of the study of Physics I. It is a rigorous honors level course covering topics including magnetism, waves (light & sound), and fluids. Students will work in small groups to develop their scientific skills through projects and lab investigations. Students are required to have a calculator. **Must meet Honors level requirements (see page 9).*

College Level General Chemistry I (Weight 4)**5 credits**

This is a rigorous college level introduction to chemistry. Topics covered include atomic and molecular structure, bonding, periodic law, chemical reactions, stoichiometry, enthalpy, kinetic molecular theory and gas laws, and solution chemistry. Students will be involved in laboratory research that supports topics covered in the course. Students are required to have a calculator. **Must meet college Placement Test Exemption (see page 9).*

College Level General Biology (Weight 4)**5 credits**

This course offers an investigative approach to the science of biology involving the molecular structure and function of the cell. This is extended to the tissue level of organization and coordinated with the total organism. Emphasis is on nutrition and energy release in an attempt to note the importance of bio-energetics to the cell and organism at large. Laboratory exercises parallel lecture and reading assignments. **Must have successfully passed high school Lab Biology and meet college placement test exemption (see page 9).*

SOCIAL STUDIES

Honors U. S. History I (Weight 3)**5 credits**

Honors United States History I course will examine the political, economic and social forces from Colonization through World War I and the Roaring Twenties. The various events and ideas of the past will be compared to society today. In addition, the class will facilitate student research utilizing a variety of media sources. This includes primary and secondary historical documents and materials. Special attention will be placed on how these resources, documents, and skills relate to the diverse amount of current themes and events. At the honors level, students will be expected to

demonstrate higher-level critical thinking skills, listening skills, note taking skills but most importantly reading skills. Lastly, students will be required to participate in class discussions and activities. ****Must meet Honors level requirements (see page 9).***

CP U. S. History I (Weight 2)

5 credits

CP United States History I course will examine the political, economic, and social forces from Colonization through World War I and the Roaring Twenties. The various events and ideas of the past will be compared to society today. In addition, the class will facilitate student research utilizing a variety of media sources. This includes primary and secondary historical documents and materials. Special attention will be placed on how these resources, documents, and skills relate to the diverse amount of current themes and events. Higher-level critical thinking skills, listening skills, and note taking skills will be emphasized.

U.S. History I – (Weight 1)

5 credits

United States History I examines the political, economic, and social forces from Colonization through World War I and the Roaring Twenties. The course is designed to provide students with the analytical skills and knowledge necessary to deal critically with the problems and materials in American history. Technological resources such as laptops and Smart Board will be used to promote active learning and to support ongoing review and reinforcement of key concepts. Consideration is given to students' learning styles and supplemental materials are available. Modifications and accommodations are made in accordance with students' IEPs.

Honors U. S. History II (Weight 3)

5 credits

Honors United States History II surveys the course of events from the Great Depression through Contemporary United States: International Policies and Interconnected Global Society (1970-Today). The course will concentrate on the social, political, economical, and technological aspects of this time period. The various events and ideas of the past will be analyzed and evaluated in terms of their correlation to society today. In addition, the class will facilitate student research utilizing a variety of media sources. This includes primary and secondary historical documents and materials. Special attention will be placed on how these resources, documents, and skills relate to the diverse amount of current themes and events. At the honors level, students will be expected to demonstrate higher-level critical thinking skills, listening skills, note taking skills, but most importantly reading skills. Lastly, students will be required to participate in class discussions and activities. ****Must meet Honors level requirements (see page 9).***

CP U. S. History II (Weight 2)

5 credits

C.P. United States History II surveys the course of events from the Great Depression through Contemporary United States: International Policies and Interconnected Global Society (1970-Today). The course will concentrate on the social, political, economic, and technological aspects of this time period. The various events and ideas of the past will be analyzed and evaluated in terms of their correlation to society today. In addition, the class will facilitate student research utilizing a variety of media sources. This includes primary and secondary historical documents and materials. Special attention will be placed on how these resources, documents, and skills relate to the diverse amount of current themes and events. Higher-level critical thinking skills, listening skills, and note taking skills will be emphasized.

U.S. History II – (Weight 1)

5 credits

United States History II surveys the course of events from the Great Depression through Contemporary United States: International Policies and Interconnected Global Society (1970-

Today). The course will concentrate on the social, political, economic, and technological aspects of this time period. Technological resources such as laptops and Smart Board will be used to promote active learning and to support ongoing review and reinforcement of key concepts. Consideration is given to students' learning styles and supplemental materials are available. Modifications and accommodations are made in accordance with students' IEPs.

College Level World History (Weight 4)

5 credits

This college course is the study of American political, social, and intellectual development from 1865 to the present. Topics include Reconstruction, industrial and transportation revolution, labor movement, the crisis in agriculture, expansion and the new Manifest Destiny, and problems of the twentieth century. **Must meet college Placement Test Exemption (see page 9).*

Honors World History & Cultures (Weight 3)

5 credits

Honors World History course prepares students to be citizens of an increasingly interdependent world and to compete in the global marketplace. Students will gain an understanding of the historical and cultural development of the western and non-western worlds from the emergence of the modern world to the modern age. In addition, the class will facilitate student research utilizing a variety of media sources. This includes primary and secondary historical documents and materials. Special attention will be placed on how these resources, documents, and skills relate to the diverse amount of current themes and events. At the honors level, students will be expected to demonstrate higher-level critical thinking skills, listening skills, and note taking skills but most importantly reading skills. Lastly, students will be required to participate in class discussions and activities. **Must meet Honors level requirements (see page 9).*

CP World History & Cultures (Weight 2)

5 credits

CP World History course prepares students to be citizens of an increasingly interdependent world and to compete in the global marketplace. Students will gain an understanding of the historical and cultural development of the western and non-western worlds from the emergence of the modern world to the modern age. In addition, the class will facilitate student research utilizing a variety of media sources. This includes primary and secondary historical documents and materials. Special attention will be placed on how these resources, documents, and skills relate to the diverse amount of current themes and events. Higher-level critical thinking skills, listening skills, and note taking skills will be emphasized.

World History & Cultures – (Weight 1)

5 credits

World History & Cultures prepares students to be citizens of an increasingly interdependent world and to compete in the global marketplace. Students will gain an understanding of the historical and cultural development of both the western and non-western worlds from the emergence of the modern world to the modern age. Technological resources such as laptops and Smart Board will be used to promote active learning and to support ongoing review and reinforcement of key concepts. Consideration is given to students' learning styles and supplemental materials are available. Modifications and accommodations are made in accordance with students' IEPs.

WORLD LANGUAGES

NOTE: Two years of the same World Language is usually recommended for admission into most colleges offering Bachelor's Degrees.

CP Italian I (Weight 2)

5 credits

CP Italian I is an introduction to the Italian language and culture. This course emphasizes the use of vocabulary, spoken accent, grammar, and syntax and cultural information all in context so that students can read, write, speak, and understand the language at a basic level. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century.

Honors Italian I (Weight 3)

5 credits

Honors Italian I is an introduction to the Italian language and culture. This course emphasizes the use of vocabulary, spoken accent, grammar, and syntax and cultural information all in context so that students can read, write, speak, and understand the language at a basic level. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century. ****Must meet Honors level requirements (see page 9).***

CP Italian II (Weight 2)

5 credits

CP Italian II builds upon the knowledge and the skills gained in CP Italian I. Emphasis is on perfecting pronunciation, mastery of the basic grammatical structures, and increased communicative proficiency. Acquisition of functional vocabulary and cultural information is expected. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century. *(Prerequisite: Successful completion of CP or Honors Italian I)*

Honors Italian II (Weight 3)

5 credits

Honors Italian II builds upon the knowledge and the skills gained in Honors Italian I. Emphasis is on perfecting pronunciation, mastery of the basic grammatical structures, and increased communicative proficiency. Acquisition of functional vocabulary is expected. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century. ****Must meet Honors level requirements (see page 9).***

Honors Italian III (Weight 3)

5 credits

The course is a continuation and recycling of knowledge acquired in Italian I and Italian II, as well as an introduction to new vocabulary, more rigorous grammar structures, and expressions. Students will be expected to expand their vocabulary range to include more sophisticated terms, use advanced language expressions, verb tenses, and grammatical concepts all in cultural context. Students will view Italian language films and read selected Italian literature. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century. ****Must meet Honors level requirements (see page 9).***

Honors Italian IV (Weight 3)

5 credits

Honors Italian IV is an advanced level course that is designed to increase the student's communication skills, writing skills, and cultural awareness of the Italian language and culture. It will train students in higher-level abilities, emphasizing comprehension of vocabulary, speaking, listening, reading, and writing. Presentation of cultural topics and current events will increase the student's knowledge of Italy and its people. Students, in small or large groups, will be required to participate and interact in conversational Italian. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century. ****Must meet Honors level requirements (see page 9).***

Honors Latin II (Weight 3)

5 credits

Students continue their study of a language still alive and cherished. In Latin II students will study more advanced Latin grammar and vocabulary as well as Roman culture, history, and mythology. In addition to Roman studies, the students will continue to compare and contrast some of the ancient cultures, continuing to learn the major contributions of each. The result of the student's study of Latin is improved knowledge of both English vocabulary and grammar, an expanded understanding of the relationship of the ancient world to his or her own, and appreciation of other foreign languages and culture. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through authentic tasks and resources, purposefully giving the students opportunities to use the language in other disciplines and to prepare them for global interactions of the 21st century. ****Must meet Honors level requirements (see page 9).***

Honors Latin III (Weight 3)

5 credits

Latin lives on in the Latin III class. Building upon lessons from Latin II, this course continues to develop the linguistic skills of the language, an understanding of the history of the Greco-Roman civilizations, and an appreciation of the cultural developments of the classical world. Students will expand their knowledge of Latin grammar, strengthen their comprehension and translation skills, enhance their oral and written language, and enrich their English vocabulary. Additionally, students will increase their awareness of the contributions of classical civilization to the Western world and broaden their perspective on life and language. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through authentic tasks and resources, purposefully giving the students opportunities to use the language in other disciplines and to prepare them for global interactions of the 21st century. ****Must meet Honors level requirements (see page 9).***

Honors Latin IV (Weight 3)

5 credits

Continuing the exploration of Latin literature and culture, students explore various literary styles and become acquainted with several Latin authors through a survey of Latin literature, a review of major grammatical forms, and continued study of English derivatives. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through authentic tasks and resources, purposefully giving the students opportunities to use the language in other disciplines and to prepare them for global interactions of the 21st century. ****Must meet Honors level requirements (see page 9).***

Spanish I – (Weight 1)

5 credits

Spanish I is an introduction to the Spanish language and culture. This course emphasizes the use of vocabulary, spoken accent, grammar and syntax, and cultural information all in context so that students can read, write, speak, and understand the language at a basic level. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century. Modifications and accommodations are in accordance with students' IEPs. Consideration is given to students' learning styles in small group environment.

CP Spanish I (Weight 2)

5 credits

CP Spanish I is an introduction to the Spanish language and culture. This course emphasizes the use of vocabulary, spoken accent, grammar and syntax, and cultural information all in context so that students can read, write, speak, and understand the language at a basic level. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century.

Honors Spanish I (Weight 3)

5 credits

Honors Spanish I is an introduction to the Spanish language and culture. This course emphasizes the use of vocabulary, spoken accent, grammar and syntax, and cultural information all in context so that students can read, write, speak, and understand the language at a basic level. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century. ****Must meet Honors level requirements (see page 9).***

CP Spanish II (Weight 2)

5 credits

CP Spanish II builds upon the knowledge and the skills gained in CP Spanish I. Emphasis is on perfecting pronunciation, mastery of the basic grammatical structures, and increased communicative proficiency. Acquisition of functional vocabulary and cultural information is expected. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century. *(Pre-requisite: Successful completion of Spanish I)*

Honors Spanish II (Weight 3)

5 credits

Honors Spanish II builds upon the knowledge and the skills gained in Honors Spanish I. Emphasis is on perfecting pronunciation, mastery of the basic grammatical structures, and increased communicative proficiency. Acquisition of functional vocabulary and cultural information is expected. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century. ***Must meet Honors level requirements (see page 9).**

Honors Spanish III (Weight 3)

5 credits

The course is a continuation and recycling of knowledge acquired in Spanish I and Spanish II, as well as an introduction to new vocabulary, more rigorous grammar structures, and expressions. Students will be expected to expand their vocabulary range to include more sophisticated terms, use advanced language expressions, verb tenses, and grammatical concepts all in cultural context. Students will view Spanish language films and read selected Spanish literature. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century. ***Must meet Honors level requirements (see page 9).**

Honors Spanish IV (Weight 3)

5 credits

Honors Spanish IV is an advanced level course that is designed to increase the student's communication skills, writing skills, and cultural awareness of the Spanish language and culture. It will train students in higher-level abilities, emphasizing comprehension of vocabulary, speaking, listening, reading, and writing. Presentation of cultural topics and current events will increase the student's knowledge of Spanish – speaking countries and their people. Students, in small or large groups, will be required to participate and interact in conversational Spanish. The effective use of technology and interdisciplinary connections helps students to develop language and communicative proficiency through real-life communication, authentic tasks and resources, purposefully giving the students opportunities to use the language beyond the classroom and to prepare them for global interactions of the 21st century. ***Must meet Honors level requirements (see page 9).**

ELECTIVES

Please note: Elective courses require a minimum of 12 students to run each semester. If enrollment does not meet 12 students, the course will close.

AUTOMOTIVE

Automotive Technology Specialization III (Weight 2)

15 credits

This course challenges seniors in automotive technology careers to further their knowledge of advanced automotive concepts. Students will be focusing on building their knowledge on advanced electrical and electronics, advanced engine performance and hybrid technology systems. Workplace readiness skills are also covered throughout the school year. Topics covered are: properly completing job applications, resume writing skills, and interviewing skills. Opportunities for School to Work placement may be available to any applicable students.

Collision Repair Technology III (Weight 1)

15 credits

In this course students will be learning the fundamentals of automotive restoration and customization. Students will be learning repair techniques and developing hands on skills used in the automotive industry. The students will be incorporating knowledge and skills learned in the Automotive and Collision specialization areas. Upon completion, students will have working knowledge and skills in the following areas: shop safety practices, tool and fastener usage, welding concepts, electrical principles, engine theory, automotive system operations, collision shop repairs, and custom paint design/refinishing. The primary purpose of this course is to give our 12th grade transportation students a challenging and unique work experience prior to leaving GCIT.

Small Engine Level IV (Weight 2)

15 credits

This course equips students with the knowledge and skill to troubleshoot, repair and maintain small engines and vehicle systems (compact diesel engines, motorcycles, ATV's, marine engines, power equipment). Topics may include (but are not limited to) engine service and reconditioning; maintaining frames and suspension, wheels and brakes, and drive trains; servicing fuel, cooling, lubrication, exhaust, and electrical systems; performing tune ups; using hand, power, and overhaul tools, and reading and interpreting service manuals and parts catalogs. Students may also learn safety on the job, and employability skills.

Small Engine Fundamentals (Weight 2)

5 credits

Students will build skills for success through research and hands-on work in a shop environment. Small Engine Fundamentals students will be exposed to a variety of different technologies. They will gain experience with using tools and equipment to perform work on mechanical and electrical engine systems. The units of study include: Shop safety, tools and equipment (including measuring equipment), mechanical and electrical fundamentals, mechanical and electrical system operation, system troubleshooting and repair. 15 student limit

RCSJ Ford ASSET – senior year option (Weight 4)

The goal of this program is to provide graduates with theory and practice, through classroom study and internships, to qualify for immediate employment in the automotive industry, or to transfer to a four-year automotive management program. Ford ASSET, the Automotive Student Service Educational Training Program, is a cooperative agreement among the College, Ford Motor Company, and the Gloucester County Institute of Technology. ASSET is a full time, two-year curriculum composed of five, 20-week semesters. Alternating 10-week sessions of classroom instruction and paid dealership internships provide theory and practice that is necessary for a career in the automotive industry. Students interested in the Ford ASSET senior option must apply through Rowan College of South Jersey as well as take and successfully pass the RCSJ Accuplacer placement test in their junior year. Please see your guidance counselor for further information. ****Must meet college Placement Test Exemption (see page 9).***

BUSINESS

Business and Finance Capstone (Weight 3)

5 credits

The Business Capstone Project is a multi-faceted assignment that serves as a culminating academic experience for students. The Capstone Project is a long-term investigative project that allows students to combine their knowledge and skills and to show what they learned in their subject area.

The Capstone project is a Marketing Plan for a new start up product/service and includes the following:

1. A research paper (Research about the product/service and the industry)
2. A portfolio (physical document of their research)
3. Market Research
4. Marketing Plan
5. Final Presentation

Business Management (Weight 1)

5 credits

This course is designed to provide students with a basic overview of Business Management. This course focuses on motivation and leadership, communication skills, negotiation and decision making skills, international business, business law and ethical decision making. Students will develop effective negotiating and decision making skills, and understand the correlation between the global economy and the global marketplace.

Financial Literacy (Weight 1)

5 credits

Financial Literacy is a course that acquaints students with basic financial planning concepts and illustrates how these concepts apply to everyday life. The program includes Financial Planning, Budgeting, Saving and Investments, Credit and Insurance.

Financial Literacy – On Line (Weight 1)

2.5 credits

Financial Literacy is a course that acquaints students with basic financial planning concepts and illustrates how these concepts apply to everyday life. The program includes Financial Planning, Budgeting, Saving and Investments, Credit and Insurance.

QuickBooks (Weight 2)

5 credits

QuickBooks is an online accounting software system used primarily by millions of entrepreneurs and small business owners globally to manage all of their business's finances in one place. This course is designed for those students who want to start a new business or to streamline an existing family business. Students will learn how to manage daily business transactions such as creating invoices and sales receipts, tracking sales and inventory costs, processing payroll, paying bills, preparing bank reconciliations, and creating budgets and financial statements. Students will learn how to navigate an online Accounting Program and have a hands-on working knowledge of QuickBooks. Students will receive a certificate to show completion of the Quick Books Program.

COMPUTER SCIENCE

Security+ (Weight 4)

5 credits

Security+ is an online course that prepares students for the Security Pro certification exam and CompTIA's Security+ certification exam. Students learn how to secure a corporate network using a layered security model. Information Technology Senior students only.

Advanced Topics in Computer Science (Weight 3)

5 credits

This class is designed for seniors to explore beyond what IT Essentials and Networking offer and gives students the possibility of investing in avenues of physical computing, Minecraft, programming, html/JavaScript, to get them excited and prepare them for whatever else they may experience outside of GCIT. It will be a very driven course where students will think of a concept they want to explore, learn about it, create the item, see if it works, document the process, refine it and continue until there is a presentable item that works. The students will present their findings

each week to the class. Students will be required to keep logs and a portfolio to show off when they get to college!

COSMETOLOGY

Personal Skin Care and Make Up (Weight 1)

5 credits

This course is intended to educate students on proper care of the skin, Basic Facials, Make up application techniques, hairstyling techniques, and nail care. Safety and sanitation will also be included in this course. This is offered to Junior and Senior students NOT enrolled in Cosmetology.

CULINARY

Advanced Culinary Pathways (Weight 1)

5 credits

The Hospitality, Tourism and Recreation Career Cluster focuses on entrepreneurship, culinary math, nutrition and wellness, garde manger, plate presentation, food innovations, public speaking, culinary project management, marketing, community leadership, restaurant operations, food/beverage services, lodging, recreation event planning, and hospitality travel-related services. All classes are held in the professional kitchen. Students will learn the front of the house and back. There will be competition opportunities as well as numerous guest speakers. Organizations involved are ProStart, FCCLA, and SkillsUSA members. **Prerequisite: Students must have a minimum of two years in the Culinary and/or Baking/Pastry Arts field.**

Baking and Pastry Arts Specialization IV (Weight 2)

15 credits

During the student's senior year they will continue to enhance their technical Baking and Pastry skills while producing Holiday and retail bakery products. Students will have the opportunity while working in the bakeshop to prepare specialty items such as sweet & laminated doughs, pate a choux, working with cakes using rolled fondant as well as experience International and American regional baked goods. Senior year will also include review of both practical and theoretical skills necessary to successfully pass the NOCTI exam and obtain their Baking and Pastry Arts certificate of completion.

Culinary Arts Specialization IV (Weight 2)

15 credits

Culinary and Baking Pastry Arts IV is an opportunity for students to further enhance their skills that were acquired in Culinary and Baking Pastry Arts I, II and III. While employing all of the skills learned during the student's freshman and sophomore year, students will be afforded the time to concentrate on particular areas of interest while refining their skills. The skills will include research and course work in the areas of grain, legumes, pasta, fish, shellfish, meat, and poultry. During the senior year, students will be afforded the opportunity to learn nutritional cooking, sustainability in the food service industry, menu planning and costing. Students will be given the opportunity to take the Nationally recognized SERV safe exam. Students are also able to go out to School to Work and work in the Food Service Industry.

Cooking 101 (Weight 1)

5 credits

This class will take you on a tour of the world's different foods. Each week you will have the opportunity to cook and eat two entrées, a soup, an appetizer, and a dessert from a different country. You will learn cooking skills, kitchen safety and sanitation and food customs. Examples of Countries: Thailand, Mexico, Poland, Germany, etc. Learn about the different cultures through food.

Exploratory Baking (Weight 1)

5 credits

Students enrolled in Exploratory Baking will be taught safety and sanitation daily during the time in class and in the bakeshop. They will work on products to create breads, cookies, pastries, and cakes using formulas and mixing methods learned in theory. Students will collaborate when working on small recipes, as well as large formulas used in a commercial bakery and will be introduced to measuring techniques using liquid measures, as well as dry measurements and scaling formulas on a balance scale. Technology-related mathematics, reading, writing, vocabulary, and science are integrated throughout the course.

DIGITAL MEDIA

Animation & Special Effects (Weight 4)

5 credits

In this course students will learn about both traditional and computer animation and special effects and how they are used in media production. They will create their own short animations and special FX scenes. Projects will include: stop motion animation project, 2D computer animation project, green screen project, split screen project and After Effects project. The student, upon successful completion, will have a demo reel of their finished work both in front of and behind the camera. (Prerequisite: Computer and/or Animation skills) Students may register though RCSJ as an HSOP class. Please see your guidance counselor if you are interested.

Digital Design and Print (Weight 1)

5 credit

This senior level elective for Digital Communications students is designed to give real-world working experience as design and print professionals. Students will be given direction as they see projects through the graphic design process.

Video Game Design (Weight 3)

5 credits

In this course students will learn the basics of creating video games using the Gamemaker Studio 2.0 Game Design Engine. Projects will include: text based role playing game, graphic based role playing game, simple 2D game, side scroll game and a final advanced game. The student, upon successful completion, will have playable versions of their finished work. (Prerequisite: Computer and/or Game Making skills)

ENGINEERING

Engineer Your World (Weight 3)

5 credits

The Engineer Your World classroom is a place where students engage in authentic engineering practices in a problem-solving, challenge-based environment. In this course, students will pursue a semester-long project in one of the selected areas: sUAS drone technology, additive manufacturing, automated manufacturing, architectural drafting, engineering design/technology, industrial and engineering technology, mobile robotics, technical drafting, urban search and rescue robotics, and NASA's Human Exploration Rover Challenge (HERC). Throughout the semester, students will gain hands-on experience and conduct routine presentations, engineering notebook reviews, knowledge assessments, and mini competitions to prepare for competition in their selected area. Students in this course are expected to either enroll in SkillsUSA or NASA's HERC Challenge and will have the opportunity to compete in extra-curricular competitive events related to their work in class.

Engineering Capstone Project (Weight 3)

5 credits

Capstone is learning in action. As part of the core curriculum of the STEM Academy at GCIT, it provides students with a critical learning experience. Over the course of the class, students work in teams to solve a business problem - conduct research, design a solution, and build a prototype.

Honors Physics C Mechanics (Weight 3)

7.5 credits

Physics C Mechanics begins by integrating the use of calculus (differentiation and integration) into the Physics 1 topics of mechanics. This allows students to solve calculus based problems. This course emphasizes problem solving in the context of the principles of physical laws and principles; as well as the ability to apply that knowledge and skill to phenomenon in either an experimental or theoretical setting. Great attention is given to strengthening and reinforcing the natural connections between the sciences and with mathematics. Proper preparation to take this course includes the completion of Honors Physics. While it is best if Calculus is completed prior to the start of this course; it is possible to take it in parallel if the student can commit additional time and effort. Students will be involved in problem-solving activities on an individual, small group and large group basis. Through this process the ability to read and understand problems, break them down into their component parts and then create and present solutions will be developed. These same skills will be developed with activities in the physics laboratory. In that case, problem solving will be done in real time with hands-on problems. Much of the work done in the laboratory will include the gathering of data through PASCO electronic sensors. That data will be configured by the students using the PASCO software and then analyzed using that software as well as several compatible programs, including Word and Excel. Through this process both analytical techniques as well as technological capability will be developed. ***Prerequisite: Honors Calculus***

Health Science

College Level Anatomy and Physiology II (Weight 4)

5 credits

Building on the concepts of Anatomy and Physiology I, Anatomy and Physiology II investigates the endocrine, immune, digestive, excretory, respiratory, circulatory and reproductive systems of the human body. Laboratory experiences include computer-assisted instruction and experimental labs which reinforce contemporary scientific concepts. ****Must meet college Placement Test Exemption and any College Pre-requisites (see page 9).***

Personal Training I (Weight 3)

5 credits

Personal training is a course where students will have the opportunity to earn an American Council on Exercise's Personal Trainer Certification. This course is designed to give students the knowledge and understanding necessary to prepare for the ACE Personal Trainer Certification Exam and become effective personal trainers. This course presents the ACE Integrated Fitness Training Model as a comprehensive system for designing individualized programs based on each client's unique health, fitness, and goals. The information covered by this course and the ACE IFT Model will help students learn how to facilitate rapport, adherence, self-efficacy and behavior changes in clients, as well as design programs that help clients to improve posture, movement, flexibility, balance, core function, cardio respiratory fitness, and muscular endurance and strength. After this course, students will understand the most current, complete picture of the knowledge, instructional techniques and professional responsibilities personal trainers need to provide safe and effective exercise instruction to their clients. Students will be responsible for designing and supervising exercise programs. Students will also be certified in CPR/AED for the Professional Rescuer and First

Aid. This course will run similar to an online college course with meeting, classroom instruction, labs and independent study, research and assignments.

PERFORMING ARTS

Additive Manufacturing & 3D Design (Weight 2)

5 credits

This S.T.E.A.M. course has many activities and exercises that enable students to put design concepts into practice. Students solve problems through collaboration, 3D Modelling, and 3D Printing. Ideas become reality in this course. Industrial 3D printing technologies are explored throughout this class. Three-Dimensional design and Additive Manufacturing are industries that are experiencing rapid growth and careers are in-demand. This course will offer an overview of the industrial-level additive manufacturing industry. Additionally, students will get training in Solidworks, an industry standard three-dimensional modelling program. We will also investigate 3D Printing (Additive Manufacturing). The curriculum aligns to certification for students who wish to pursue it.

(Prerequisite: CADD I)

Advanced Acting Studies/Theater Hist. IV/Prod. IV (Weight 3)

15 credits

Senior Drama majors will engage in advanced scene study and directing of student scenes in which they analyze text and put the analysis forth on stage. Students will have practical experience mounting a full production on stage. They will review and gain practical use of acting techniques including Stanislavski, Hagen, and Strasberg. In addition, students will explore Anne Bogart's Viewpoints system and experimental approaches through movement, advanced vocal work, and improvisation. Students will gain historical perspective in various genres with an emphasis on Theater of the Absurd. Career related options will be explored such as production, design, directing, and arts management. In addition, students will complete a senior film project and prepare for State Exit Exams. Students will write, cast, direct, film, and act in a short feature film. Capstone of the course is an audition in front of college professors as well as a written exam on all 4 years of theatre history, theatre literature, and technical theatre. The student, upon successful completion, will have a (DVD) of their finished work both in front of and behind the camera. Independent study opportunities are also available at this level. Prerequisites: Successful completion of Drama I, II, III.

Art for Engineers (Weight 1)

5 credits

An introduction to the basic elements and principles of design for engineering students to improve their sketching and visualization skills. Students will develop spatial literacy, one-point perspective, two-point perspective skills, and 3D designs. Problem solving in variety of materials and creating 3D designs including assemblages, models, constructions, and conceptual forms.

Art II (Weight 1)

5 credits

Art II builds on concepts and skills taught in Introduction to Art. Units include elements of art and principles of design, still life drawing, advanced drawing techniques, figure drawing, pottery, color theory, painting, and sculpture. Students improve problem solving, decision-making, and critical thinking skills through study of art criticism, history, and production.

Prerequisite: Introduction to Art

Automotive Arts (Weight 1)

5 credits

This course is for the beginner level artist wishing to better their skills in the related arts used in the automotive/motorcycle and truck industry. Students will learn basic skills in the following areas: custom paint design layout and airbrush, metal parts design and fabrication and custom automotive applications. Starting with metal design and fabrication skills, students will work with various tools and welding equipment to shape, design, and sculpt custom projects. The next segment will focus

on basic refinishing principals to prepare the students for work in custom painting. Students will learn how to complete a basic design sketch of a project for completion. They will learn basic techniques and fundamentals of airbrushing. Students will learn how to create stencils, use different medias and tools to create their own unique art designs. Students may work on a variety of subjects ranging from helmets, guitars, bowls, to car hoods and fenders. Other areas that will be covered in Automotive Arts are stereo installation and lighting, body and trim modifications, suspension and wheel upgrades.

Branding and Advertising Design (Weight 1)

5 Credits

Branding and Advertising Design can make or break a business. Students will uncover the messages and hidden meanings that are woven into the advertisement and logo designs we see every day. The class will utilize market research to become aware of cultural differences as they take their business models and learn how to design an identity kit to target a specific audience with proper design colors and elements. Students will create professional quality logos and advertisements in Adobe Illustrator and Photoshop.

Children's Dance Instruction (Weight 1)

5 credits

In this class, students will examine theories, methods, and assessment tools in the teaching of creative movement to children. This class will concentrate on the basics of movement learning, developmentally appropriate activities, lesson planning, and pacing in classroom instruction. Students are going to play the role of the student learning how to teach, the teacher teaching, and the student learning from others learning how to teach. You will gain knowledge and a deeper understanding of teaching creative movement to children that is applicable to a variety of settings: dance studios, summer camps, after-school programs, and daycares.

College Level Film History and Appreciation I (Weight 4)

5 credits

Film History and Appreciation I explores the first 50 years of the art and impact of the most persuasive, pervasive information delivery system ever invented. By screening and discussing a wide array of choice clips and feature films across a selection of genres, students will trace the history of film and the evolution of a 'film language' that we are all familiar with today (whether one is aware of this or not). Furthermore, this class acts as an introduction to the Adobe Premiere Pro editing program as students create short videos so they can develop an appreciation and understanding of the processes that add up to the making of a film. (This class is a Dual Credit Course with RCSJ) . ****Must meet college Placement Test Exemption (see page 9).***

College Level Oral Communications (Weight 4)

5 credits

This course stresses principles and practices of oral communication, especially speaking to inform. The course includes consideration of voice and articulation, conversation and discussion. Emphasis is on preparation and presentation of speeches. ****Must meet college Placement Test Exemption (see page 9).***

Computer Graphics (Weight 1)

5 credits

Students will utilize prior computer experience and graphic design knowledge as they learn the process and art of combining text and images to communicate an effective message. Through the use of industry-standard applications, students will design logos, graphics, brochures, newsletters, posters, signs, and other types of visual communication. Students will understand photo

manipulation and pre-press production as it pertains to the overall business of a graphic design studio.

Dance IV (Weight 3)

15 credits

The students will continue to explore the primary disciplines of Ballet IV, Modern IV, and Jazz Dance/Rhythmic Concepts IV in a holistic way. The emphasis of the dance training will be on anatomically correct movement as it applies to dance technique. They will expand on their understanding of the use of the common elements of time, space and energy as they pertain to all dance forms. In addition, students will connect the history of Classical Ballet, Contemporary Ballet, Modern Dance, Post-Modern Dance, Jazz Dance, Theater Dance, and Vernacular Dance to gain insight of how dance effects our society. The students will explore the art of choreography using the compositional devices that they obtain in 11th grade to develop choreography. They will focus on the elements of dance (space, time, energy, and shape) in the process of making dances. The course will conclude in a choreographic work using other 12th grade students as well as 11th grade students in their dance.

Digital Cinema I (Weight 1)

5 credits

Have you ever wanted to make your own movie? The Digital Cinema course teaches students the fundamentals of digital video production. Students will produce, direct, shoot, edit, and act in their own short movie. Projects include: short film production, how to edit dialogue, how to edit action and the production of a music video/photo montage. At the end of the course the student will create their own demo reel so they can show off their work.

Digital Cinema II (Weight 2)

5 credits

In Digital Cinema II students build upon the writing, producing, directing, shooting and editing skills they gained in Digital Cinema. Projects will include: writing & directing a short film, making a music video, creating a Public Service Announcement (PSA), and introduction to special effects. At the end of the course the student will create a demo reel of all of their work. (Prerequisite: Digital Cinema I)

Digital Photography (Weight 1)

5 credits

Students will become well-rounded in the fundamentals of digital photography. Course instruction will focus on learning how a camera works, understanding composition, understanding lighting, and learning how to use Adobe Photoshop to edit and enhance an image. While receiving basic instruction, demonstration, and viewing sample photography, students will shoot assignments based on what they are learning and review peer shots in order to gain an understanding of what makes a successful photo. Students will gather and assemble a portfolio of their own photographs.

Media Design (Weight 1)

5 credits

An introduction to elements of design, spatial relationships, typography, and imagery as they apply to practical visual solutions for self-promotion, logo design, layout design, and sequential arrangements. This course instructs the student in media design skills employing traditional and digital tools, materials, and procedures employed in the communication arts industry. The focus will be on finding creative visual solutions to communication problems using technical skills and creating the GCIT yearbook. This course is heavily based on technology.

21st Century Art (Weight 1)

5 credits

Can you imagine creating art and having the whole world see it? You don't consider yourself a "techie" but want to channel your creativity with 21st century tools like Photoshop? This class is for you! Apply your creativity to create digital compositions, an interactive computer game, and design

three-dimensional objects and much more. In addition, we will explore art history, graphic design theory, web 2.0 concepts, and related digital arts technologies. No previous experience needed.

Introduction to Art (Weight 1)

5 credits

Introduction to Art is designed to develop an understanding of the processes and production of art, art history, criticism, and aesthetics. Students will be presented with studio projects and will execute their skills to best fit their ideas. Through the processes of art, students will work with several mediums, study master artists, learn how to investigate and interpret art. Students will focus on problem solving and enhancing their artistic abilities. The goal of this course is for students to become proficient and more confident in the use of their creative side and to develop a general appreciation for art, to develop the ability to use different art mediums, and to understand elements of art and design to the fullest potential.

Introduction to Dance (Weight 1)

5 credits

This course is intended for the non-dance major student. It is an introduction to the various styles and techniques within the area of dance. Students will participate in activities which will enhance their perceptual, intellectual, physical and technical skills. Costume use and choreography will also be introduced for a greater understanding of the entire range of dance concepts.

SOCIAL STUDIES

Criminal Justice (Weight 1)

5 credits

This course will offer a unique and in-depth look at the operation of Law Enforcement and the Criminal Justice system in the United States. Topics covered will include the evolution of law enforcement, contemporary law enforcement, challenges to the law enforcement profession, the courts, and the corrections system.

Genocide: The Unspoken Truth (Weight 3)

5 credits

This course will examine various genocides and the impacts that these brutal acts of violence have had on the global community. Throughout the class students will learn the 10 stages of genocide and how they are used to frame different examples of genocide. Focus points will be on the Native American Genocide, the Great Irish Famine, the Armenian Genocide, the Holocaust, Stalin's Purges, the Nanking Massacre, the Cambodian Genocide, the Sudan Genocide, the Bosnia Genocide and the Rwanda Genocide. The course is designed to provide students with the analytical skills and actual knowledge necessary to understand past and present intolerance and discrimination. Higher-level critical thinking skills, listening skills, note-taking skills and Individual and project-based learning will be emphasized.

Honors Most Dangerous Time: The Cold War (Weight 3)

5 credits

After World War II, the United States and the Soviet Union spent years and billions of dollars in pursuit of allies who agreed with their respective ideologies. The U.S. supported democracy and free markets, while the Soviet Union advocated communism and a controlled economy. For nearly 45 years these two world political powers struggled for hearts and minds through beliefs, proxy wars, covert actions, and direct intervention. This course will attempt to make sense of all that transpired during this time period.

21st Century Leadership (Weight 3)

5 credits

This course will equip students with the leadership skills necessary for success in the 21st century. Designed with the 21st century leader in mind, this course will emphasize skills to prepare students for college, career, and life-long learning. From "hard" skills such as technology proficiency like

digital media, social media, etc., to “soft” skills such as interview, speaking techniques, and group leadership, students will develop the skills necessary to succeed in today’s world. Course topics will also include development of ethical and character-based leadership. Students will practice these skills hands on and will use their skills to better the school.

OTHER ELECTIVES

Independent Study (Weight 1) – Senior Option Only

5 credits

Students may choose an independent study course. This is a course undertaken independently by the student with a faculty sponsor. It may be done in only specific subject areas. Prerequisites for this include having passed the NJSLA requirement and a cumulative GPA of 3.0. An application, teacher recommendation and prior approval of the course is necessary. See your Guidance Counselor for more information.

School-to-Careers (Weight 1) – Senior Option Only

Seniors who are on track to graduate may participate in School-to-Careers. Students earn credit through employment in their career specific area. This is coordinated through the Guidance Counselor and the School-to-Careers office. Please see your Guidance Counselor for more specific information.