

2017-2018

R2i2 Course Guide



R2i2 Registration Guide

Richland Two Institute of Innovation (R2I2)
763 Fashion Drive Columbia, SC 29229
Mailing Address: 124 Risdon Way Columbia, SC 29223

R2i2 Mission Statement

As The Institute of Innovation, R2i2's mission is to foster individual student growth as an innovator within a safe environment by stimulating creativity, encouraging leadership, promoting teamwork, and building entrepreneurial skills while engaging the global community.

Richland School District Two Comprehensive Developmental School Counseling Mission Statement

Richland School District Two outlines for each student, grades PK-12, the personal, social, career, and educational knowledge and skills that support a rewarding and productive life in an ever-changing world. The comprehensive guidance program framework of Richland School District Two provides standards and strategies for each school in the district to follow in developing and implementing a Comprehensive Developmental School Program.

Leadership Team

Kevin Alberse, Director
Jenniferr Cain, Assistant Principal
Maria Owens, Outreach Officer
Sandra Baker, Administrative Assistant
Valerie Williamson, Intake Coordinator

Faculty

Alvin Brown
Michael Ann Fitch
Kirstin Bullington
Nic Jones
Robin Jones
Kelli Sumter

Graduation Requirements

To receive a high school diploma student must complete 24 Carnegie Units (see below), and demonstrate proficiency in computer literacy

Subject	SC Diploma Requirements	Subject	SC Four Year Pub College Requiren
English/Language Arts	4	English	4
Mathematics	4	Mathematics	4
Natural Science *	3	Science (3 Lab Sciences)	3
U.S. History and Constitution	1	U.S. History	
Economics	.5	Economics	1
U.S. Government	.5	Government	.5
Other Social Studies	1	Social Studies	.5
Physical Education or JROTC	1	Physical Education or JROTC	1
Foreign Language or Career & Technology Ed **	1	Foreign Language***	2
Electives	6.5	Fine Arts	1
Health (district)	.5	Academic Electives	1
Computer Science	1		

*One science course must include an end-of-course test given by the state which counts as 20% of the final grade.

**For students in a college preparatory program, one unit must be earned in a foreign language (Most four-year colleges and universities require at least two units of the same foreign language). For students in a Tech Prep program, one unit must be earned in career and technology education.

*** Public Colleges in SC require 2 Foreign Language credits (Clemson and the College of Charleston require 3 credits)

End of Course (EOCT) State Exams will be administered as prescribed by the State Department of Education and will count 20% of the final grade for English 1, Algebra 1/Algebra Part II, US History and Biology 1.

Career Clusters and Majors

INDIVIDUAL GRADUATION PLAN (IGP) consists of the state high school graduation requirements and/or college entrance requirements with course recommendations for successful completion of a major that aligns to post-secondary education and the workplace. An IGP is designed to assist students and their parents in exploring educational and professional possibilities, and in making appropriate secondary and post-secondary decisions. The IGP is part of the career planner. It builds on the coursework, assessments, and counseling. Students are never locked into a specific cluster or major. Students can change majors if their professional interests change. Students can use the curriculum framework, with its clusters of study and majors, and career assessment information in making these decisions.

Bell Schedule

8:20 a.m.-11:00 a.m. Block or Period 1-2 & 3-4 (8:20-9:38 a.m. and 9:42-11:00 a.m.)

12:40 p.m.-3:20 p.m. Block or Period 5-6 & 7-8 (12:40 1:58 p.m. and 2:02-3:20 p.m.)

WEDNESDAY

8:30-10:30 a.m. Block or Period 1-2 & 3-4 (8:30-9:28 a.m. and 9:32-10:30)

1:20-3:20 p.m. Block or Period 5-6 & 7-8 (1:20-2:18 p.m. and 2:22-3:20 p.m.)

SHUTTLE DEPARTURE TIMES FROM HOME SCHOOLS

RV and **WH** 12:40

BHS 12:35

RNE to **SV** 12:30 Departs **SV** 12:45

ALL Shuttles will depart R2I2 at 3:30

Wednesdays

BHS -12:56 P.M.

RNE: 12:40 PM

RV -1:00 P.M.

SV -1:05 P.M.

WH - 1:05 P.M.

R2i2 CURRICULUM

Next Energy and Fuel Cell Engineering

Clean Energy Systems 1 638000CW

Students will learn about ecology and Earth systems as well as engineering for environmental sustainability. The first part of this course will be an overview of non-fossil fuel sources (Next Energy) and the current uses of energy, as well as the need to diversify energy sources. The second part of the course will focus on Fuel Cell Technology with students working on functional fuel cells. Students will have access to a Sustainable Energy Lab on site at R2i2.

Credit: 1

Clean Energy Applications 2 638100CW

This course builds on the foundation of Course 1 and introduces nuclear power, steam generation, fuel cells, geothermal power, water power, AC/DC power generation, heat transfer and the laws of thermodynamics. In addition, students now use chemical and thermal energy principles to create, store and use energy efficiently to power a variety of mechanical and electrical devices. Students will engage in a variety of hands-on design projects to demonstrate principles using advanced technology hardware and software.

Credit: 1

Computer Aided Design & Manufacturing

Mechanical Design 1 617200CW & Mechanical Design 2 617300CW

This course covers the numerical design of manufacturing chains encompassing design, geometrical molding, product assembly, workshop blueprints, prototyping of manufacturing concepts and plans. A CAD foundation will be covered in the first part of the course through use of industrial grade software. Following this, CAM tools will be used to translate design into G-codes for prototyping and possible manufacture.

Credit: 2

Architectural Design 1 617100CW & 2 617100CW (3D Printing & Design)

The purpose of the CAD/CAM course at R2i2 is to educate students on the use and application of CATIA: a multi-platform computer-aided design (CAD)/computer-aided manufacturing (CAM)/computer-aided engineering (CAE) software suite. Students will design and manufacture parts and assemblies, according to the specifications of each assignment, using 3D Printing. Students will prepare for academic certification in CATIA and be informed on the pursuit of professional positions found in this industry.

Credit: 2

Supply Chain and Global Logistics Management

Global Business Logistics 619901CW: Topics cover emerging and important areas such as product/service supply chains, security, sustainability, and supply chain vulnerability. Students will be given an introduction to key quantitative techniques that can be applied to logistics such as simulation and modeling. Decision Models for Supply Chain Management, Logistics, Emerging Markets, and Economic Development, as well case studies for world leaders in global logistics will be studied. Students will establish their own distribution and logistics center to serve the Richland 2 Backpack Program.

Credit 1

Computer Forensics & Global Supply: 609901CW Computer Forensics is focused on teaching students how to gather evidence and prevent cybercrime through classes in computer, criminology, law, digital security and investigative techniques. Students will learn to collect, preserve, present, and prepare computer-based evidence for the purposes of criminal law enforcement or civil litigation. Activities will define the central roles of computer forensic practitioner involved in investigating computer crime scenes and torts involving computers. Students will be prepared to assist in the formulation and implementation of organizational computer forensics preparedness policies, to determine the necessity for forensic procedures, extend governance processes to allow for proper future forensic investigations, and to be contributing members of computer forensics investigation teams. **Credit: 1**

Managerial Accounting and Managerial Finance

This course will cover a wide range of topics that will emphasize the use of both internal and external data to enhance decision-making skills of managers. Concepts covered will include and overview of the management accounting function within an organization, cost management and cost accumulation systems, planning and control systems, use of historical data in forecasting costs, and the use of accounting information in management decision-making. Case studies will be used to enhance students' critical thinking, problem solving and communication skills. These courses are also a study of financial risk and return, capital budgeting, valuation, capital structure, working capital management and current topics in financial management.

Managerial Accounting: 689901CW This course will cover a wide range of topics that will emphasize the use of internal and external data to enhance decision making skills of managers. Topics include the management accounting function within an organization, cost management, cost systems, budgeting, and planning and control. Case students and simulations will be used to enhance critical thinking, problem solving, and communication skills. **Credit: 1**

Corporate Finance: 689902CW This course is an overview of financial management. Topics include understanding financial statements, a study of financial risk and return, capital budgeting, valuation, capital structure, working capital management, long term financing, and current topics in financial management. Case studies, simulations, and current events will be used to enhance students' critical thinking, problem solving and communication skills. **Credit:1**

Apple Application Development (Computer Programming 1) 505000CW

Students will learn the Swift programming language and then learn the Application Programming interface (API) to write their own Applications for us on iPhone and iPad. Students will receive an Apple App Developer License. **Credit: 1**

Mobile and Non-Traditional Food and Service

Mobile and Non-Traditional Food and Service (Business Management & Admin Elective 1) 549900CW & 549901CW

Students will learn how to operate the culinary responsibilities of mobile food businesses, as well as how to determine and execute a viable business plan for mobile businesses. Students will be taught the costs and various legal and other responsibilities they need to be aware of in order to be successful.

Credits: 2

Entrepreneurial Management 2 (Business Management & Admin Elective 2) This purpose of the Entrepreneurial Management course is for the learner to apply management concepts to new and growing businesses while simultaneously focusing on new challenges and opportunities. Students will develop an understanding of how to manage the growth of a small business via planning, budgeting, and strategic execution. Emphasis is placed on maintaining competitive advantage, recognizing and adjusting to changes within the business environment and efficient use of resources in addressing operating constraints. Experiential learning will allow students to apply the information and skills learned. Students will continue to have the opportunity to interact with local entrepreneurs and chefs as they did in Mobile and Non-traditional Food and Service. **Credits: 2**

Marketing and Social Media: 509901CW Specifically designed for those students who are interested in a marketing related career. By examining real-world marketing problems, students will develop those skills required for success as a marketing manager. This course is research-intensive, group-oriented, and comprehensive. Explores implications, opportunities and challenges for business and communications professionals using social media and contemporary advertising for organizations. Students will participate in creation of a vast array of social media sites, resources, applications and tools, as well as evaluate the impact, effectiveness and design of various elements of advertising strategy and campaigns. **Credit: 1**

The following core courses are tentative to be offered at R2i2 during 2017-2018 in conjunction with R2i2 course programming (i.e. a student may only be enrolled in a core course at R2i2 if they are also enrolled in a R2i2 course).

English III Honors

This course is designed for the highly motivated, exceptionally talented student who enjoys reading. This course concentrates on developing the student's ability to study and read literature critically and analytically through the major themes and writers of American literature from 1600 to the present. Critical analysis of works of literature as well as documented critical papers on literary topics will be required.

See school website for required summer reading for honors students.

Credits: 1 Unit

Prerequisite: English II Honors and teacher recommendation

English III CP

English III CP is a survey of American Literature designed to help students reinforce their reading, writing, research, and communication skills. Students will read and write in a variety of genres. This course is for students who plan to attend college or technical school.

Credits: 1 Unit

Prerequisite: English II CP

English IV Honors

English IV Honors is designed for the highly motivated, exceptionally talented student who enjoys reading and writing. This course concentrates on developing the student's ability to study and read literature critically and analytically through the study of major themes and writers of British literature from the Anglo- Saxon period to the present. Critical analysis of literature and independent research are required.

See school website for required summer reading for honors students.

Credits: 1 Unit

Prerequisite: English III Honors or English III CP with Teacher Recommendation

English IV CP

English IV College Prep is a survey of British Literature from Anglo-Saxon to the present designed to help students reinforce their reading, writing, research, and communication skills. Students will read and write in a variety of genres. This course is for high-school seniors who plan to attend college or technical school.

Credits: 1 Unit

Prerequisite: English III CP

Algebra 2 CP

This college preparatory course contains an in-depth study of functions, patterns, relations, and concepts of number systems. This includes linear, quadratic, exponential, absolute value, radical, and rational functions.

Credit: 1 Unit

Prerequisite(s): Algebra 1 and Geometry

Algebra 3 CP

The course expands on topics of Algebra 2 and introduces topics of Pre-Calculus. There will be an emphasis on linear and quadratic functions, polynomial functions, exponential and logarithmic functions, conic sections, sequences & series, and trigonometric functions.

Credit: 1 Unit

Prerequisite(s): Algebra 2 CP and Geometry CP

Probability and Statistics CP (12th)

This is a beginning statistics course for students. Students will apply basic statistical concepts to and draw inferences from data sets explore the relationships between theoretical and experimental probability and use them to solve problems. Students will also

Credit: 1 Unit

Prerequisite(s): Algebra 2 CP

DUAL CREDIT COURSE OFFERINGS

Dual Enrollment courses are offered through Midlands Tech and taught by their staff on R2i2's Student Center campus. To enroll in dual credit courses, students must take the Accuplacer test and meet specified criteria established by the college. The Accuplacer is administered on the campus of BHS and Ridgeview for their students in the fall of each year to all juniors. All other high school students interested in taking dual credit courses must visit the Testing Center on one of the Midlands Technical College campuses.

Please visit <http://www.midlandstech.edu/admissions/testing-services>

Students who have not taken the placement test, must do so no LATER THAN FEBRUARY 15TH, 2017 to be eligible to take the course offered at R2i2.

Completion of these courses does not guarantee that a college will accept the college credit. **NOTE: The student must receive credit in both Eng 101 & Eng 102 to meet the Eng 4 requirement for a high school diploma.**

BUS 121 BUSINESS LAW I This course is a study of legal procedures, law and society, classifications and systems of law, the tribunals administering justice and their actions, contracts, sales, transfer of titles, rights and duties of the parties, conditions, and warranties. (Prerequisite: RDG 100)
3.0 Credits Spring

CRJ 101 INTRODUCTION TO CRIMINAL JUSTICE 65200EW This course includes an overview of the functions and responsibilities of agencies involved in the administration of justice including police organizations, court systems, correctional systems, and juvenile justice agencies. (Prerequisites: RDG 100, ENG 032)
3.0 Credits Fall

ENG 101 ENGLISH COMPOSITION I 301500EW This is a (college-transfer) course in which the following topics are presented: a study of composition in conjunction with appropriate literary selections, with frequent theme assignments to reinforce effective writing. A review of standard usage and the basic techniques of research are also presented. (Prerequisites: ENG 100, RDG 100 or equivalent placement test scores)
3.0 Credits Fall

ENG 102 ENGLISH COMPOSITION II 301600EW This is a (college-transfer) course in which the following topics are presented: development of writing skills through logical organization, effective style, literary analysis and research. An introduction to literary genre is also included. (Prerequisite: ENG 101)
3.0 Credits Spring

HIS 201 AMERICAN HISTORY: DISCOVERY TO 1877 332100EW This course is a survey of U.S. history from discovery to 1877. This course includes political, social, economic, and intellectual developments during this period. (Prerequisites: RDG 100, ENG 100) **3.0 Credits Fall**

HIS 202 AMERICAN HISTORY: 1877 TO PRESENT 332200EW This course is a survey of U.S. history from 1877 to the present. This course includes political, social, economic, and intellectual developments during this period. (Prerequisites: RDG 100, ENG 100)

3.0 Credits Spring

MAT 110 COLLEGE ALGEBRA 413300EW This course includes the following topics: polynomial, rational, logarithmic, and exponential functions; inequalities; systems of equations and inequalities; matrices; determinants; and solutions of higher degree polynomials. (Graphing calculator required) (Prerequisites: MAT 102, RDG 100 or equivalent placement test score)

3.0 Credits Spring

SPC 205 PUBLIC SPEAKING 304500EW This course is an introduction to the principles of public speaking with application of speaking skills. Students entering this course must be able to communicate clearly with American speakers of English. (Prerequisite: RDG 100, ENG 100, or equivalent test score) **3.0 Credits Fall**