

REAL Curriculum Program Alignment Proposal

Department or School: Department of Information Technology Date: 3/16/2020

Degree type: BS BA BBA BSN BM BFA BSW Minor Certificate

Program: Computer Science Minor

REAL Area Program Designation Sought (check all that apply): R E A L

Dept/School Contact: Art Carter, aecarter@radford.edu

BS/BA Requirements:

- Any degree program that fulfills a REAL area must include at least 9 unique credit hours for each area covered. At least 3 of these 9 credit hours must be at the 300 level or above
- A single major degree program may fulfill no more than three REAL areas for any one student, unless all four REAL areas are fulfilled by accreditation or licensure requirements.
- A single minor or certificate degree program may fulfill no more than two REAL areas.
- Degree program may cover up to two REAL areas using a single prefix.
- All courses documenting the coverage of a REAL area must fulfill all learning outcomes and be designated in that area.
- All courses that document fulfillment of a REAL area within a degree program of study are NOT required to be taught by the department/school. However, departments/schools are expected to formally communicate with other departments about reliance on and inclusion of courses in their degree program plans of study. Indicate this through signature of chair or director of the partnering department or school in the areas below.
- Departments or schools that seek to fulfill REAL areas must acknowledge assessment requirements for those areas. Assessment of degree seeking students is required to be conducted yearly by the department or school offering the degree program.
- If departments or schools want to use a menu of courses to fulfill a particular area, please duplicate the sections below for each REAL area and include information for each course included in the menu of options.
- Please save this file for submission as PROGRAM NAME_ProgramType.docx (Example: Criminal Justice_BS.docx)

By signing, the department/school acknowledges the above conditions and considerations:

Dept/School Signature	Date:
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Official Program Description:

Please paste the entire official program description from the Radford University catalog in the space within this box. Find those here: <https://catalog.radford.edu/>

Please note that every department/school will have to submit a catalog change proposal for program that asks the Registrar's Office to insert language about the program coverage of the REAL areas into the official Radford University catalog upon approval.

(17 Semester Hours)**Courses in the R Category:**

- ITEC 120 - Principles of Computer Science I (4 credits)
- ITEC 220 - Principles of Computer Science II (4 credits)
- ITEC 322 - Discrete Mathematics or
ITEC 324 - Principles of Computer Science III (3 credits)

Other Courses: (6 credits)

- Six Elective Credit Hours in ITEC

Note(s):

Each course applied to the minor must be passed with a grade of "C" or better. The minor GPA will be calculated by using the 17 best hours applied toward the minor.

SCIENTIFIC AND QUANTITATIVE REASONING

<p>R Area: Course Prefix: ITEC Course Number: 120 Course Title: Principles of Computer Science I Credit Hours: 4 New course: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Revised course: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Projected student enrollment per academic year: 75</p>	<p>Is this course required or an elective for your degree program? <input checked="" type="checkbox"/> Required <input type="checkbox"/> Elective Is this course offered within your dept/school? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, collaborating dept/school must also complete the remaining elements, and must sign below.</p> <p>Course Rotation: <input checked="" type="checkbox"/> Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Intersession <input type="checkbox"/> Other (Explain below)</p> <p>Intended Frequency: <input type="checkbox"/> Every academic year <input checked="" type="checkbox"/> Every semester <input type="checkbox"/> Every other year <input type="checkbox"/> At least once every three years <input type="checkbox"/> Other</p> <p>Signature of collaborating chair/director indicating acknowledgement for inclusion and designation if not offered in dept/school:</p>
<p>R Area: Course Prefix: ITEC Course Number: 220 Course Title: Principles of Computer Science II Credit Hours: 4 New course: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Revised course: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Projected student enrollment per academic year: 40</p>	<p>Is this course required or an elective for your degree program? <input checked="" type="checkbox"/> Required <input type="checkbox"/> Elective Is this course offered within your dept/school? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, collaborating dept/school must also complete the remaining elements, and must sign below.</p> <p>Course Rotation: <input checked="" type="checkbox"/> Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Intersession <input type="checkbox"/> Other (Explain below)</p> <p>Intended Frequency: <input type="checkbox"/> Every academic year <input checked="" type="checkbox"/> Every semester <input type="checkbox"/> Every other year <input type="checkbox"/> At least once every three years <input type="checkbox"/> Other</p> <p>Signature of collaborating chair/director indicating acknowledgement for inclusion and designation if not offered in dept/school:</p>
<p>One of the following classes must be taken as an elective to meet the 300 level class in the R area requirement.</p>	
<p>R Area: Course Prefix: ITEC Course Number: 322 Course Title: Discrete Math for Computer Science Credit Hours: 3 New course: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Revised course: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Projected student enrollment per academic year: 20</p>	<p>Is this course required or an elective for your degree program? <input type="checkbox"/> Required <input checked="" type="checkbox"/> Elective Is this course offered within your dept/school? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, collaborating dept/school must also complete the remaining elements, and must sign below.</p> <p>Course Rotation: <input checked="" type="checkbox"/> Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Intersession <input type="checkbox"/> Other (Explain below)</p> <p>Intended Frequency: <input type="checkbox"/> Every academic year <input checked="" type="checkbox"/> Every semester <input type="checkbox"/> Every other year <input type="checkbox"/> At least once every three years <input type="checkbox"/> Other</p> <p>Signature of collaborating chair/director indicating acknowledgement for inclusion and designation if not offered in dept/school:</p>
<p>R Area: Course Prefix: ITEC Course Number: 324 Course Title: Principle of Computer Science III Credit Hours: 3 New course: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Revised course: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Projected student enrollment per academic year: 20</p>	<p>Is this course required or an elective for your degree program? <input type="checkbox"/> Required <input checked="" type="checkbox"/> Elective Is this course offered within your dept/school? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, collaborating dept/school must also complete the remaining elements, and must sign below.</p> <p>Course Rotation: <input checked="" type="checkbox"/> Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Intersession <input type="checkbox"/> Other (Explain below)</p> <p>Intended Frequency: <input type="checkbox"/> Every academic year <input checked="" type="checkbox"/> Every semester <input type="checkbox"/> Every other year <input type="checkbox"/> At least once every three years <input type="checkbox"/> Other</p> <p>Signature of collaborating chair/director indicating acknowledgement for inclusion and designation if not offered in dept/school:</p>
<p>R Area: Course Prefix: ITEC Course Number: 375 Course Title: Data Science Credit Hours: 3 New course: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Revised course: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Projected student enrollment per academic year: 20</p>	<p>Is this course required or an elective for your degree program? <input type="checkbox"/> Required <input checked="" type="checkbox"/> Elective Is this course offered within your dept/school? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, collaborating dept/school must also complete the remaining elements, and must sign below.</p> <p>Course Rotation: <input checked="" type="checkbox"/> Fall <input type="checkbox"/> Spring <input type="checkbox"/> Intersession <input type="checkbox"/> Other (Explain below)</p> <p>Intended Frequency: <input type="checkbox"/> Every academic year <input checked="" type="checkbox"/> Every semester <input type="checkbox"/> Every other year <input type="checkbox"/> At least once every three years <input type="checkbox"/> Other</p> <p>Signature of collaborating chair/director indicating acknowledgement for inclusion and designation if not offered in dept/school:</p>

R Designated Course Required within the Program of Study Approved for Inclusion in the General Education Coursework: (please list at least one, can also be listed above but does not need to be) ITEC 120.

R Area:

Learning Goal: To apply scientific and quantitative reasoning to questions about the natural world, mathematics, or related areas.

Learning Outcome 1: Students apply scientific and quantitative information to test problems and draw conclusions.

Description of learning outcome assessment plan:

Data will be collected from the REAL General Studies Minor assessments conducted by the university in the student's senior year. Once the data is received in the department the department's assessment committee will review the data to determine if corrective action is necessary. If needed the assessment committee will develop an improvement plan in combination with faculty teaching classes in this area and the department's curriculum committee. The agreed upon changes will be incorporated into the classes. The department's assessment committee will then continue monitoring the collected assessment data to determine the effectiveness of the corrective action and determine further actions if necessary.

Learning Outcome 2: Students evaluate the quality of data, methods, or inferences used to generate scientific and quantitative knowledge.

Description of learning outcome assessment plan:

Data will be collected from the REAL General Studies Minor assessments conducted by the university in the student's senior year. Once the data is received in the department the department's assessment committee will review the data to determine if corrective action is necessary. If needed the assessment committee will develop an improvement plan in combination with faculty teaching classes in this area and the department's curriculum committee. The agreed upon changes will be incorporated into the classes. The department's assessment committee will then continue monitoring the collected assessment data to determine the effectiveness of the corrective action and determine further actions if necessary.

Additional information for REAL Council consideration:



Are existing material resources adequate to support this program alignment proposal?

Yes No If not, what additional material resources would be needed?

Are existing space resources adequate to support this program alignment proposal?

Yes No If not, what additional space resources would be needed?

Are existing human resources adequate to support this program alignment proposal?

Yes No If not, what additional human resources would be needed?

Department Curriculum Committee Recommendation:	Signature:	Date:
Chair/Dean on Behalf of Dept/School:	Signature:	Date:
College Curriculum Committee Approval:	Signature:	Date:
Dean/AVP Approval:	Signature:	Date:
REAL Council Recommendation:	Signature:	Date:
Faculty Senate Curriculum Committee Recommendation:	Signature:	Date:
Faculty Senate Approval:	Signature:	Date:
Provost Approval:	Signature:	Date: