

Motion to Adopt Changes to Core Characteristics

The Faculty Senate recommends adoption of the changes to the Core Characteristics recommended by GECAC/CCAC.

Present wording:

1. A student must take CORE 101 during his/her first semester of enrollment or receive transfer course equivalency credit. A student must continue taking Core A courses in sequence each semester, excluding summers, until the sequence is successfully completed.

New wording approved by GECAC/CCAC:

1. Students **are advised** to take CORE 101 during their first semester of enrollment or receive transfer course equivalency credit. In addition, students **are advised** to take Core A courses in sequence each semester, excluding summers, until the sequence is successfully completed.

Rationale

Students in certain programs at Radford University are often unable to take CORE 101/102/201/202 in sequence their freshmen and sophomore years. One such program is the 3/2 Cooperative Engineering Agreement with Virginia Tech. They are able to take CORE 101 and CORE 102 their freshmen years, along with one other Core class each semester. In the summer between their freshman and sophomore years they need to take Engineering Fundamentals I and II at a community college.

In the fall of their sophomore year they must double up on the number of upper-level physics and math classes so they may transfer to Tech after their sophomore year. This timetable is necessitated by Tech's ABET (Accreditation Board for Engineering and Technology) accreditation. Thus their schedules in the fall of their sophomore years have often been the following:

PHYS 305—Modern Physics (4 hours)
PHYS 306—Intermediate Mechanics (3)
MATH 251—Calculus III (3)
MATH 260—Linear Algebra (3)
CHEM 101—General Chemistry I (4)

Due to the limited number of Chemistry class sections offered at RU students have often had to wait until their sophomore year to take CHEM 101 Thus adding CORE 201 to this schedule isn't reasonable.

Their schedules for the spring of their sophomore years have often been the following:

PHYS 307—Electricity and magnetism (4)
PHYS 320—Mechanics (3) or PHYS 430—Quantum Mechanics (3)
PHYS 310—Optics (4) and/or PHYS 406—Geophysics (4)
MATH 252—Calculus IV (3)
CHEM 102—General Chemistry II (4)

Adding 3 hours for CORE 202 in the spring semester is unreasonable.

Another example of unattended hardship to students caused by the mandatory enrollment in CORE courses is in the traditional chemistry degree. A typical student performing well should take the fall of their sophomore year:

MATH 152 – Calculus II (3)
CHEM 301 – Organic Chemistry (4)
CHEM 324 – Analytical Chemistry (4)
PHYS 111 – General Physics (4)

Although it is possible to add CORE 201 to reach 18 credit hours it is unreasonable in that this is the first semester the students are exposed to upper-level laboratory classes and reports. This schedule also includes 12 hours of laboratory time per week, as CHEM 324 has 6 hours of laboratory time assigned and in practice often requires more time in the laboratory than those six hours. It is also of course possible to delay courses, but MATH 152, PHYS 111, and CHEM 301 are all prerequisite courses that any delay in taking will negatively affect the scheduling of every semester for the student thereafter. CHEM 324 is an important course for students to take early on in their curriculum as it is vital to students to help them through CHEM 401, 402, and 424. It also needs to be taken before students apply for summer chemistry programs. Without analytical chemistry experience it is highly unlikely a student would for example be awarded a NSFREU fellowship (of which we have had several in the past).

There is some urgency to this motion – departments must know ASAP in order to properly advise students.