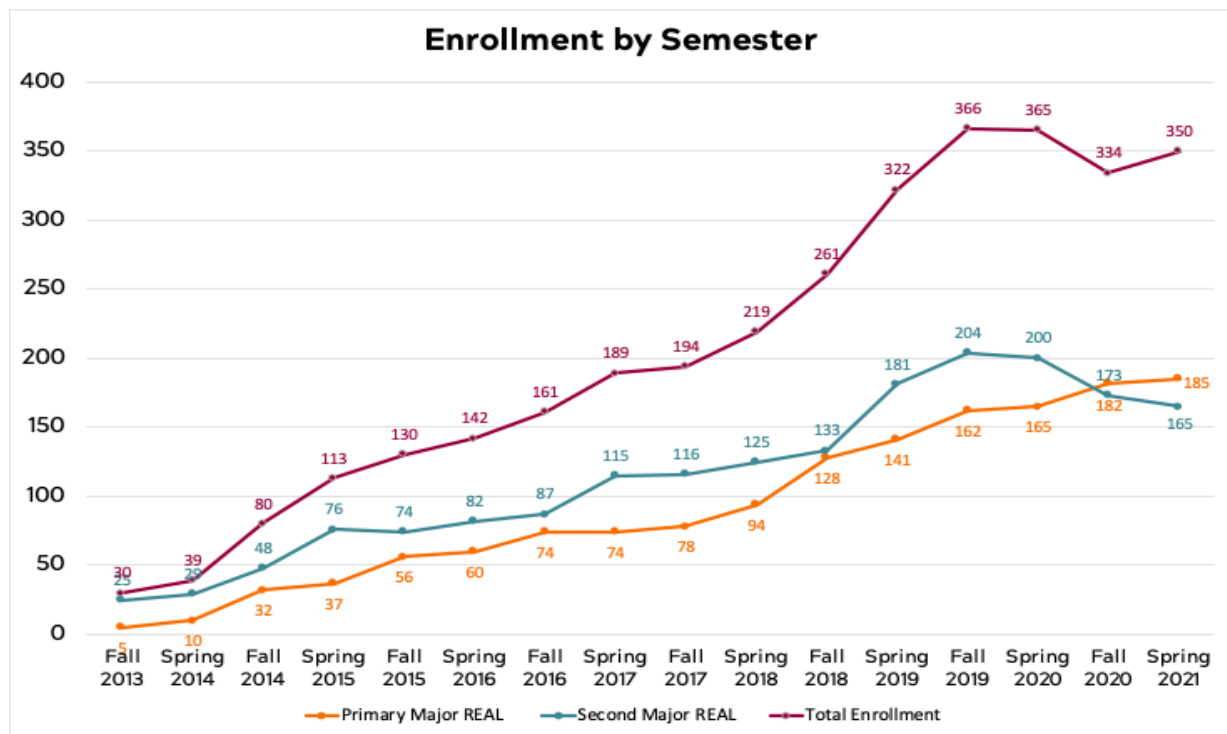


Degree: BS Real Estate

New Major: Commercial Development and Investment

Need:

The BS Real Estate was approved by SCHEV in 2013. Since that time, the number of majors has grown to over 350 students (see figure below). Our placement, six months out from graduation, is approximately 100% with an average starting salary ranging between \$60,000 and \$65,000. We are now ranked as the 3rd best real estate degree program behind Penn and Berkeley (<https://www.greatbusinessschools.org/best-real-estate-programs/>).



A defining element of the academic program is that students are encouraged to have a second major or a strong minor to provide breadth and depth to their education. Thus, nearly half of the majors pursue a second major.

As enrollment has grown, the one-size-fits-all major is not serving our students as well as it could. Real estate is a broad field that encompasses where one lives, works, shops and plays. A common industry distinction is a division between residential (single-family homes) and commercial (includes multifamily housing).

The current, single major under the BS Real Estate is focused on preparing students to work in large, commercial real estate companies. This format is not preparing our students as well as would be accomplished by splitting the degree into two majors. The current major is not as analytically rigorous as it could be to support students entering commercial real estate and is not providing students with education they need for a career in residential real estate.

We are proposing to split the BS Real Estate into two majors to improve our service to students and to enhance their professional success upon graduation:

- Commercial Development and Investment, and
- Residential Development and Investment.

The current, single major, will become the Commercial Development and Investment major with some minor adjustments. The Residential Development and Investment major is being developed with several new courses being added to the curriculum.

The best way to think of this division is that graduates of the Commercial major will work at large, national real estate firms and graduates of the Residential major will work on a more local level. Examples of employment of graduates that would sort into the two majors are provided in Table 1.

Table 1. Example Employment for Recent BS Real Estate Majors

Commercial Development and Investment		
Company	Position Title	Location
CBRE	Assistant Manager	Denver, CO
CBRE	Retail Platform Coordinator	Chicago, IL
Credit Suisse	Investment Banking Analyst	New York, NY
Hensel Phelps	Office Engineer	Seattle, WA
Hitt Contracting	Project Engineer	Falls Church, VA
JLL	Capital Markets Analyst	Morristown, NJ
Manifold Real Estate	Development Analyst	Austin, TX
Standard Communities	Senior SSP Associate	Los Angeles, CA
Residential Development and Investment		
Company	Position Title	Location
Arlington County	Building Code Inspector	Arlington, VA
Jim Barb Realty	Sales Consultant	Winchester, VA
K. Hovnanian® Homes	Sales Consultant	Washington, DC
Lee County	Community Development Director	Jonesville, VA
Pearson Smith Realtors	Realtor	Ashburn, VA
RE/MAX8	Realtor	Blacksburg, VA
Russell & Associates	Appraiser	Christiansburg, VA
Toll Brothers	Sales Associate	Alexandria, VA

The academic training of students in the Commercial Development and Investment major will be enhanced through the ability to go into more rigorous analytical depth in courses as instructors will no longer be trying to balance between residential applications that require less rigor and commercial applications that require a higher level of rigor. These adjustments will involve less than 20% change in the content of REAL 3034 (Real Estate Market Analysis) and REAL 4075/4076 (Commercial Real Estate Studio). These changes in the curriculum will better prepared graduates for the types of commercial real estate positions shown in the above table.

Students served:

In exploring student interest in these majors, we polled students in the Careers in Real Estate course (REAL 1014) who are just starting their studies and students in REAL 4076 (Real Estate Studio)

that are in the last semester of their undergraduate studies. We provided students with the draft check sheets and asked them which they would choose. The results are interesting and show strong demand for both majors. For the students in the Careers class 55% choose residential (Table 2) and for the Studio class 64% choose commercial (Table 3). We suspect these differences in percentage are due to two factors. First, many students do not know about commercial real estate when they enter the program; their knowledge is typically based on their family purchasing a home and watching the HG and DIY television networks. They learn about commercial real estate through the curriculum and the current commercial focus likely leads toward students choosing the commercial option.

Table 2. Commercial/Residential Choices by Students in the Careers in Real Estate Course



Table 3. Commercial/Residential Choices by Students in the Real Estate Studio Course



It is expected that 70-80 percent of current students will choose the Commercial Development and Investment major or stay with their current BS Real Estate major, and that this share will decrease to 50-60 percent of the BS Real Estate majors as the Residential Development and Investment major attracts students. It is expected that splitting the degree into two majors, accompanied by a strong marketing campaign, will fuel growth to about 500 total majors.

Resource needs:

None, the change can be accomplished within current resources.

Administration:

The BS Real Estate is administered by the Program in Real Estate within the Pamplin College of Business.

Communicating new major:

- Students and faculty will be notified by e-mail.
- Students will also be notified in the weekly newsletter sent to majors.
- E-mails will be sent to admissions, academic advisors and University Studies personnel that collaborate with the Program in Real Estate.
- The change will also be clearly documented on the Program in Real Estate web page.

BS Real Estate Teach Out/Transition Plan:

- Last term to enroll: Spring 2022
- Last term to graduate: Spring 2025
- Communication:
 - Students and faculty will be notified by e-mail.
 - Students will also be notified in the weekly newsletter sent to majors.
 - E-mails will be sent to academic advisors that collaborate with the Program in Real Estate.
- Stop-outs:
 - All courses are available for the new major so students can voluntarily stop-out
 - There will be no force-outs.
- Returning students:
 - No courses are being terminated in this process so students will have full access to courses required under the current major.
 - Students after spring 2022 will likely have to add a semester to accommodate the new requirements if they choose the Residential Development and Investment major.

Original SCHEV Approved Curriculum and Current Curriculum

B.S. Real Estate – SCHEV Approved 120 credits	B.S. Real Estate - Current 120 credits
General Education Curriculum (36 credits)	General Education Requirements (36-45 credits)
Curriculum for a Liberal Education	Pathways (credit hours vary by core and restricted elective courses that double count for pathways requirements)
Core Courses (41 credits)	Core Courses (45-48 Credits) (Students only need to take 45 credits if the COMM 2004 requirement is satisfied by selected Pathways courses.)
COMM 2004 Public Speaking (3 credits) ⁺	COMM 2004 Public Speaking (3 credits) ⁺
AAEC 4754 Real Estate Law (3 credits) ⁺	AAEC 4754 Real Estate Law (3 credits) ⁺
AAEC 4764 Real Estate Appraisal (3 credits) ¹	
	ACIS 2115 Principles of Accounting (3 credits) ^{2*}
AHRM 2676 Residential Property Management (3 credits) ^{3**}	
AHRM 4684 Managing and Leasing Commercial Properties (3 credits) ⁴	
ENGL 3774 Business Writing (3 credits) ⁵⁺	
	ENGL 3764 Technical Writing (3 credits) ⁵⁺
	PM 4684 Managing & Leasing Commercial Properties (3 credits) ^{4*}
FIN 3104 Introduction to Finance (3 credits) ^{6**}	
FIN 4154 Real Estate Finance & Investment (3 credits) ^{6**}	
	REAL/FIN 3044 Financing Real Estate Projects (3 credits) ^{6*}
MKTG 4734 Real Estate Marketing (3 credits) ⁷	
	REAL/MKTG 3034 Real Estate Market Analysis (3 credits) ⁷
	REAL 1004 Discovering Real Estate (2 credits) ^{8*}
REAL 2014 Careers in Real Estate (1 credit) ^{9**}	
	REAL 1014 Careers in Real Estate (1 credit) ^{9*}
REAL 3014 Professional Development in Real Estate (1 credit) ^{10**}	

	REAL 2044 Professional Development in Real Estate (3 credit) ^{10*}
	REAL 2034 Real Estate Data Analysis (3 credits) ^{11*+}
REAL 3024 Applied Real Estate Development (3 credits)	REAL 3024 Applied Real Estate Development (3 credits)
REAL 4075 Real Estate Studio (3 credits)	REAL 4075 Real Estate Studio (3 credits)
REAL 4076 Real Estate Studio (3 credits)	REAL 4076 Real Estate Studio (3 credits)
UAP 2004 Principles of Real Estate (3 credits)	UAP/REAL 2004 Principles of Real Estate (3 credits)
	Choose Two Courses (6 credits)¹²
	BC 2014 Construction Principles (3 credits) GEOG 2084 Principles of Geographic Information Systems (3 credits) MGT 2064 Foundations of Entrepreneurship (3 credits) MGT 2354 Teams, Leadership & Business: Cultivating Excellence (3 credits) MGT 3304 Management Theory & Leadership Practice (3 credits) MKTG 4734 Real Estate Marketing (3 credits) ¹ PM 2684 Marketing and Leasing Residential Properties (3 credits) ^{3*} PM 3674 Property Management Operations (3 credits) PM 4644 Advanced Property & Asset Management (3 credits) REAL 3954 Study Abroad (must be 3 credits) REAL 4064 Real Estate Appraisal (3 credits) ¹
Major Courses (XX credits)	Major Courses (XX credits)
NA	NA
Restricted Electives (21 credits)¹²	Restricted Electives (21 credits)¹³
Please see table immediately below.	Students must have a restricted elective plan of study approved by their real estate advisor by fall of their third year. It must consist of a declared double major or minor related to a focused area of study in the real estate profession. Students who are double majors may substitute courses from their other major for

	restricted electives if the courses are not real estate requirements (listed above.)
Additional Electives (22 credits)	Additional Electives (6-18 credits)
Free electives	Free electives (credit hours vary by core and restricted elective courses that double count for pathways requirements)
Total Credit Hours – 120	Total Credit Hours – 120

* New course, since SCHEV original approval

** Content moved to another course and course was deleted.

+ Double-counted as a general education course.

Detailed Changes to the program

¹ AAEC 4764 Real Estate Appraisal course was originally taught by the Department of Agricultural and Applied Economics. The course was moved to the Department of Real Estate and given the designation and course number REAL 4064 with no change in content. This course is now listed under the “choose two” course options below. As more real estate courses became available with the growth of the academic program, we could not continue to add courses to the curriculum and to add course some course needed to be removed. Students obtain knowledge of the key appraisal valuation concepts in REAL/MKTG 3034 Real Estate Market Analysis and REAL/FIN 3044 Financing Real Estate Projects, which are required courses.

² ACIS 2115 Principles of Accounting was added to the program after SCHEV approval. This course was a prerequisite at the time of SCHEV approval and was subsequently made explicit as a required course.

³ AHRM 2676 Residential Property Management course is no longer offered. The content is covered in PM 2684 Marketing and Leasing Residential Properties, a course developed after SCHEV approval, which is now listed under the “choose two” course options below. As more real estate courses became available with the growth of the academic program, we could not continue to add courses to the curriculum and to add course some course needed to be removed. We choose to expose students to the higher-level material covered in PM 4684 Managing & Leasing Commercial Properties.

⁴ AHRM 4684 Managing and Leasing Commercial Properties was originally taught in the Apparel, Housing and Resource Management program (AHRM). The course was moved to the Property Management program (PM) with the same course number, title, and content.

⁵ ENGL 3774 Business Writing was replaced by ENGL 3764 Technical Writing at the recommendation of the English Department. ENGL 3764 provides better preparation for writing technical due diligence, market analysis and financial analysis reports.

- ⁶ FIN 3104 Introduction to Finance and FIN 4154 Real Estate Finance & Investment were removed from the program and replaced with REAL/FIN 3044 Financing Real Estate Projects. Students were required to take FIN 3104 only because it was a prerequisite for FIN 4154. The content from FIN 4154 was moved to REAL/FIN 3044. In addition, content related to professional employment was also added to the new course.
- ⁷ MKTG 4734 Real Estate Marketing was moved to the list of choose two courses option and was replaced by REAL/MKTG 3034 as a required core course. MKTG 4734 focused specifically on residential sales while, REAL/MKTG 3034 focuses on data analytics necessary to support investment in a real estate asset, which is required content for all students regardless of their career path.
- ⁸ REAL 1004 Discovering Real Estate is a new course, developed after SCHEV approval, that was developed as a first-year experience to facilitate students transition into college and the Real Estate major.
- ⁹ REAL 2014 Careers in Real Estate was replaced by REAL 1014 Careers in Real Estate. By changing the course number to a 1000 level course, it makes it more feasible for students to take during their first/ freshman year.
- ¹⁰ REAL 3014 Professional Development in Real Estate was removed from the program and replaced by REAL 2044 Professional Development in Real Estate. The original course was 1 credit hour and the new course is 3 credit hours. The increase in credit hours allows for the expansion of course content to better prepare students for internships and professional employment. The course was also changed from a third-year course to a second-year course to provide students with this content earlier in their program.
- ¹¹ REAL 2034 Real Estate Data Analysis is a new course that was developed after SCHEV initial approval. It was added to the curriculum to provide students experience integrating statistics and real estate data analysis and satisfies a Pathways requirement by covering ethical use of data.
- ¹² An update to the program core consisted of allowing students to select two courses from a list of eleven courses so they may expand their foundational knowledge in a specific area of their choice based on their professional goals.
- ¹³ The Restricted Electives were switched from the list of courses below to having students choose a second majors or a minor for two reasons. The first is pragmatic, it was too difficult from an advising perspective to work with each student to select a focused set of courses as enrollment grew. Second, from a pedagogical perspective, having students choose a second major or minor ensured they would develop a focused area of knowledge that complements their real estate majors and better prepares them for professional success.

Restricted Electives (21 credits) – SCHEV Approved

Students will take at least 21 credits of restricted electives from a variety of courses offered across campus. Working with their advisor in the real-estate program, students will select a set of courses to enhance the depth of their knowledge in a specific area of the real-estate profession with at least 50% of the courses at the 3000 and 4000 level, while allowing some courses at the 1000 and 2000 levels so students can take prerequisites for the advanced courses.

AAEC 3014 Analytic Methods in Applied Economics
AAEC 3024 Monetary & Global Issues in App. Econ.
AAEC 3304 Rural and Regional Development Policy
AAEC 3314 Environmental Law (Area 7)
AAEC 3454 Small Business Man. & Ent.
AAEC 4304 Environ. and Sustainable Devel. Econ.
AAEC 4314 Environ. Econ. Analysis & Management
AAEC 4344 Sustainable Development Economics
AAEC 4804 (STAT 4804) Elementary Econometrics
ACIS 2115 or 2004 Accounting
ACIS 4344 Tax for Financial Planners
AHRM 2675 Intro. to Residential Property Man.
AHRM 3604 Housing and the Consumer
AHRM 3634 Man. Afford. & Specialized Housing
AHRM 4604 Housing, Energy & the Env. (Area 7)
AHRM 4644 Adv. Residential Property Management
AHRM 4664 Universal Design
AHRM 4674 Man. & Market. Housing for Later Life
BC 1214 Introduction to Building Construction I (Summer only)
BC 1224 Introduction to Building Construction II (Summer only)
BSE 2384 Soil and Water Resources Management
CEE 4254 Municipal Engineering
CEE 4264 Sustainable Land Development
CSES 3134 (ENSC 3134) Soils in the Landscape
ENSC 3604 Fundamentals of Environmental Science
CSES 3634 (ENSC 3634) Physics of Pollution
FIN 3055 Legal Environment of Business
FIN 3134 Finance Concepts and Skills
FREC 2554 Nature and American Values (Area 2)
GEOG 1004 Human Geog. & Sustainability (Area 3)
GEOG 2314 Maps and Mapping
GEOG 3104 Env., Problems, Pop. & Devel. (Area 7)
GEOG 4084 Intro. to Geographic Info. Systems
HORT 2134 Plants/Green Space in Urban Com. (Area 3)
HORT 3544 Landscape Construction
MGT 3304 Man. Theory and Leadership Practice
MGT 4324 (PHIL 4324) Business and Prof. Ethics
MKTG 4554 Rel. Between Buyers & Sellers
NR 4014 (ECON 4104) Natural Resource Economics

PSCI 3424 State and Local Government
PSCI 3434 Urban Politics
REAL 3954 Study Abroad (1-3 credits)
REAL 4964 Internship (1-3 credits)
REAL 4974 Independent Study (1-3 credits)
REAL 4984 Special Study (1-3 credits)
REAL 4994 Undergraduate Research (1-3 credits)
STAT 2004 Introductory Statistics (Area 5)
STAT 3005 Statistical Methods (Area 5)
STAT 3006 Statistical Methods
STAT 3604 Statistics for the Social Sciences (Area 5)
UAP 2014 Urbanization and Development (Area 3)
UAP 4374 Land Use and Environ.: Plan. & Policy
UAP 4754 Legal Foundations of Planning
SBIO 3004 Sustainable Nature-based Enterprises
SBIO 3324 Green Building Systems

**Current Program Curriculum and Proposed
Commercial Development and Investment Major**

B.S. Real Estate - Current 120 credits	B.S. Real Estate – Proposed Commercial Development and Investment Major 120 credits
General Education Requirements (36-45 credits)	General Education Requirements (36-45 credits)
Pathways (credit hours vary by core and restricted elective courses that double count for pathways requirements)	Pathways (credit hours vary by core and restricted elective courses that double count for pathways requirements)
Core Courses (45-48 Credits) (Students only need to take 45 credits if the COMM 2004 requirement is satisfied by selected Pathways courses.)	Core Courses (24 credits)
AAEC 4754 Real Estate Law (3 credits)	AAEC 4754 Real Estate Law (3 credits)
ACIS 2115 Principles of Accounting (3 credits)	ACIS 2115 Principles of Accounting (3 credits)
COMM 2004 Public Speaking (3 credits) ¹⁺	
ENGL 3764 Technical Writing (3 credits) ¹⁺	
PM 4684 Managing & Leasing Commercial Properties (3 credits) ^{2**}	
REAL 1004 Discovering Real Estate (2 credits)	REAL 1004 Discovering Real Estate (2 credits)
REAL 1014 Careers in Real Estate (1 credit)	REAL 1014 Careers in Real Estate (1 credit)
REAL 2034 Real Estate Data Analysis (3 credits)	REAL 2034 Real Estate Data Analysis (3 credits)
REAL 2044 Professional Development in Real Estate (3 credit)	REAL 2044 Professional Development in Real Estate (3 credit)
REAL 3024 Applied Real Estate Development (3 credits)	REAL 3024 Applied Real Estate Development (3 credits)
REAL/MKTG 3034 Real Estate Market Analysis (3 credits) ³	
REAL/FIN 3044 Financing Real Estate Projects (3 credits)	REAL/FIN 3044 Financing Real Estate Projects (3 credits)
REAL 4075 Real Estate Studio (3 credits) ⁴	
REAL 4076 Real Estate Studio (3 credits) ⁴	
UAP/REAL 2004 Principles of Real Estate (3 credits)	UAP/REAL 2004 Principles of Real Estate (3 credits)
Choose Two Courses (6 credits)	
BC 2014 Construction Principles (3 credits) ^{5,6}	
GEOG 2084 Principles of Geographic Information Systems (3 credits) ⁵	

MGT 2354 Teams, Leadership & Business: Cultivating Excellence (3 credits) ⁵ MGT 3304 Management Theory & Leadership Practice (3 credits) ⁷ MGT 2064 Foundations of Entrepreneurship (3 credits) ⁶ MKTG 4734 Real Estate Marketing (3 credits) ⁸ PM 2684 Marketing and Leasing Residential Properties (3 credits) ⁷ PM 3674 Property Management Operations (3 credits) ⁷ PM 4644 Advanced Property & Asset Management (3 credits) ² REAL 3954 Study Abroad (must be 3 credits) ^{5,6} REAL 4064 Real Estate Appraisal (3 credits) ⁵	
	Commercial Development and Investment Major (18-21 credits)
	COMM 2004 Public Speaking (3 credits) ¹⁺
	ENGL 3764 Technical Writing (3 credits) ¹⁺
	REAL/MKTG 3034 Real Estate Market Analysis (3 credits) ³
	REAL 4075 Commercial Real Estate Studio (3 credits) ⁴
	REAL 4076 Commercial Real Estate Studio (3 credits) ⁴
	PM 4684 Managing & Leasing Commercial Properties (3 credits) ²
	Choose One Course (3 credits)
	BC 2014 Construction Principles (3 credits) ⁵ GEOG 2084 Principles of Geographic Information Systems (3 credits) ⁵ MGT 2354 Teams, Leadership & Business: Cultivating Excellence (3 credits) ⁵ REAL 3954 Study Abroad (must be 3-credit course) ⁵ REAL 4064 Real Estate Appraisal (3 credits) ⁵ PM 4644 Advanced Property & Asset Management (3 credits) ⁵
Restricted Electives (21 credits)	Restricted Electives (18-21 credits)
Students must have a restricted elective plan of study approved by their real estate advisor by fall of their third year. It must consist of a	Commercial Development and Investment Major - Students must have a restricted elective plan of study approved by their real estate

declared double major or minor related to a focused area of study in the real estate profession. Students who are double majors may substitute courses from their other major for restricted electives if the courses are not real estate requirements (listed above.)	advisor by fall of their third year. It must consist of a declared double major or minor related to a focused area of study in the real estate profession. Students who are double majors may substitute courses from their other major for restricted electives if the courses are not real estate requirements. Residential Development and Investment Major - Students must choose one of the following minors by the start of the fall of their third year. Entrepreneurship – New Venture Growth (ENVG) (18 Credits) Housing (HSNG) (18-20 credits) Professional Sales (PRFS) (21 credits) Smart and Sustainable Cities (SSC) (19 credits)
Additional Electives (6-18 credits)	Additional Electives (6-18 credits)
Free electives (credit hours vary by core and restricted elective courses that double count for pathways requirements)	Free electives (credit hours vary by core and restricted elective courses that double count for pathways requirements)
Total Credit Hours - 120	Total Credit Hours - 120

* New course, since SCHEV original approval

** Content moved to another course and course was deleted.

+ Double-counted as a general education course.

Detailed Changes to the program

¹ COMM 2004 Public Speaking and ENGL 3764 were removed from the core requirements and moved to the major requirements.

² PM 4684 Managing and Leasing Commercial Properties was removed from the program core and added to the Commercial Development and Investment Major.

³ REAL/MKT 3034 Real Estate Market Analysis was removed from the program core and moved to the Commercial Development and Investment Major.

⁴ REAL 4075/4076 Real Estate Studio were renamed to REAL 4075/ 4076 Commercial Real Estate Studio to align the title more accurately with the content of the course and moved to the Commercial Development and Investment Major.

- ⁵ The following courses were moved from the program core (choose two) to the major (choose one) requirements for the Commercial major - BC 2014 Construction Principles, GEOG 2084 Principles of Geographic Information Systems, MGT 2354 Teams, Leadership & Business: Cultivating Excellence, REAL 3954 Study Abroad, REAL 4064 Real Estate Appraisal.
- ⁶ The following courses were moved from the program core (choose two) to the major (choose one) requirements for the Residential major - BC 2014 Construction Principles, MGT 2064 Foundations of Entrepreneurship, REAL 3954 Study Abroad.
- ⁷ The following courses were removed from the program MGT 3304 Management Theory & Leadership Practice, PM 2684 Marketing and Leasing Residential Properties, PM 3674 Property Management Operations.
- ⁸ MKTG 4734 Real Estate Marketing was removed from the program core and added to the Residential Development and Investment Major.
- ⁹ PM 2664 Introduction to Property Management is being added as a new major course required for the Residential Development and Investment Major. This was developed to include specific content related to residential property management.
- ¹⁰ REAL 4074 Residential Real Estate Studio is being added as a new major course required for the Residential Development and Investment Major. The purpose of this new course is to provide a capstone experience focused on residential real estate. The reason for the switch from a two-semester, 6-credit course for the commercial capstone to a one-semester, 3-credit residential capstone is explained below.
- ¹¹ AAEC 2104 Personal Financial Planning or CONS 2304, and UAP 3014 Urban Policy and Planning are choose-one courses added to complement the Residential Development and Investment Major.

Explanation of Replacing 6-credit REAL 4075-76 with 3-credit REAL 4074

The Commercial Development and Investment major has a two-semester, 6-credit capstone experience while the Residential Development and Investment capstone experience is a one-semester, 3-credit course. An additional course (REAL 4064 Real Estate Appraisal) has been added to the Residential Development and Investment major to maintain the same number of required credit hours in both majors. There are two reasons for REAL 4075-76 being a two-semester, 6-credit course and REAL 4074 being a one semester, 3-credit course.

- 1st. In REAL 4075-76 students work on team projects and this will not be the case for REAL 4074. REAL 4075 starts with the development of a team contract and teaming exercises that will not be included in REAL 4074. Thus, the team-development section in REAL 4075-76 is not included in REAL 4074.

2nd. While both courses cover similar topics, several require more in-depth analysis in REAL 4075-76 compared to REAL 4074. Examples include:

- Commercial developments are much larger and require more consideration of soil suitability for construction, stormwater management, addressing traffic ingress/egress, sufficiency of utilities and other factors in the due diligence process.
- Commercial designs often include multiple, large buildings that may include a mix of uses (e.g., retail/office, retail/multifamily or even retail, office and multifamily in buildings) and parking to accommodate these uses.
- Commercial developments may require rezoning with careful attention to comprehensive plans while most residential developments can be by-right and rezoning is not required. This process may involve substantial community participation that does not occur with residential development.
- Commercial market analysis requires consideration of the different product types (retail, office and residential) and attracting national firms to these spaces and is more data intensive and extensive than for residential development.
- Commercial financing involves developing a capital stack that includes developer equity, debt, and investor equity, and may include tax incentive programs like low income and historical tax credits, or opportunity zones. Residential development does not require such complicated financing arrangements.
- Commercial construction requires more complicated scheduling and takes longer for several the differences outlined in the bullets above.
- Commercial developments have leasing and property management that do not occur in residential.
- Commercial and residential sale differ in the structure of the sale of a business versus the sale of a home.

These differences lead to more detailed subtopics being covered and more in-depth analyses in REAL 4075-76 relative to REAL 4074, which requires significantly more class time.



I. BS Real Estate Common Degree Core Requirements (21 credits)

REAL 1004 Discovering Real Estate	2__
REAL 1014 Careers in Real Estate (Co: 2004 or UAP 2004)	1__
REAL/UAP 2004 Principles of Real Estate	3__
ACIS 2115 Principles of Accounting (Sophomore standing)	3__
REAL 2044 Professional Development in Real Estate (Pre: 1014)	3__
REAL 3024 Applied Real Estate Development	3__
(Co: 3044. Pre: (2004 or UAP 2004), (1014 or 2014), 2034)	
REAL/FIN 3044 Financing Real Estate Projects	3__
(Pre: (2034 or BIT 2404), (AAEC 1005 or ECON 2005))	
AAEC 4754 Real Estate Law (Junior standing)	3__

II. Commercial Development and Investment Major Requirements (15-24 credits)

COMM 2004 Public Speaking ¹ (Sophomore standing)	3__
REAL 2034 Real Estate Data Analysis ²	3__
(Pre: (UAP 2004 or REAL 2004), (REAL 2014 or REAL 1014))	
REAL/MKTG 3034 Real Estate Market Analysis	3__
(Pre: 2034, (AAEC 1005 or ECON 2005))	
ENGL 3764 Technical Writing	3__
(Junior standing. Pre: 1106 or 1204H or COMM 1016)	
PM 4684 Managing & Leasing Commercial Property (Junior standing)	3__
REAL 4075 Commercial Real Estate Studio (Pre: 3024, (3034 or MKTG 3034))	3__
REAL 4076 Commercial Real Estate Studio	3__
(Pre: (3044 or FIN 3044 or FIN 4154), 4075)	

Choose one:

BC 2014 Construction Principles (Pre: 1224)	3__
GEOG 2084 Principles of Geographic Information Systems	
MGT 2354 Leadership for Managers and Entrepreneurs (Sophomore standing)	
REAL 3954 Study Abroad (must be 3-credit course)	
REAL 4064 Real Estate Appraisal (Senior standing. Pre: 3044 or FIN 4154)	
PM 4644 Advanced Property & Asset Management (Pre: (2674 or 3674), 4964)	

III. Real Estate Electives (21 hours; at least 50% at the 3000 or 4000 level)

Students must have a restricted elective plan of study approved by their real estate advisor by fall of their third year. It must consist of a declared double major or minor related to a focused area of study related to commercial real estate. Students who are double majors may substitute courses from their other major for restricted electives if the courses are not real estate requirements in Sections I and II above.

_____ 3__	_____ 3__	_____ 3__
_____ 3__	_____ 3__	_____ 3__
_____ 3__		

IV. Pathways to General Education (36-45 credits)

The total number of credit hours will vary depending on whether the Pathways courses are used to meet departmental requirements, but the credit hours may not be counted twice. (36 credits with REAL requirements ENGL 3764 satisfying Concept 1a and REAL 2034 satisfying one Concept 5f course, and a Pathways course is selected that satisfies Concepts 2 and 7.)

Concept 1 – Discourse (9 credits)

1f – Foundational (6 credits)(COMM 1015-6 recommended)	3__ 3__
1a – Advanced/Applied (3 credits) (ENGL 3764 required for major)	3__

¹ COMM 2004 is only required if students do not take COMM 1015-6 for Pathways Concept 1f.

² BIT 2405 is a substitute for Pamplin students double majoring and real estate is not their first major.

Concept 2 – Critical Thinking in the Humanities (6 credits)	3__ 3__
(1 course should double count with Concept 7) ³	
Concept 3 – Reasoning in the Social Sciences (6 credits)	3__ 3__
(ECON 2005-6 or AAEC 1005-6 are required prerequisites for Core and Major courses)	
Concept 4 – Reasoning in the Natural Sciences (6 credits)	3__ 3__
Concept 5 – Quantitative and Computational Thinking (9 credits)	
5f – Foundational (6 credits)	3__ 3__
(MATH 1524 recommended and REAL 2034 required Core course)	
5a – Advanced/Applied (3 credits) (SPIA 2104 recommended)	3__
Concept 6 – Critique and Practice in Design and the Arts (6 credits)	
6a – Arts (3 credits)	3__
6d – Design (3 credits) (MGT 2064 recommended)	3__
Concept 7 – Critical Analysis of Identity and Equity in the United States	3__
(see Concept 2 or footnote 4)	

V. Free Electives (Remaining credits required to complete 120 credit hours required for degree)
(9-21 hours needed to reach 120 hours depending on courses taken to satisfy sections I-IV)

_____ 3__	_____ 3__	_____ 3__
_____ 3__	_____ 3__	_____ 3__
_____ 3__	_____ 3__	

GENERAL INFORMATION

- A total of 120 credit hours is required for graduation. Any exceptions to this curriculum must be approved by the student's department head and Associate Dean for Pamplin Undergraduate Programs.
- Foreign Language Requirement: Students who did not successfully complete at least two years of a single foreign, classical, or sign language during high school must successfully complete six credit hours of a single foreign, classical, or sign language at the college level. Courses taken to meet this requirement do not count towards the minimum credit hours required for graduation. Please refer to the Undergraduate Catalog for details.
- Pre-requisites: Students are responsible for ensuring they have met necessary pre-requisites for all courses. Courses with pre-requisites are noted with * (e.g. *ENGL 1106). Please refer to the Undergraduate Catalog or academic advisor.
- Transferring Courses: Requirements and procedures for transferring courses are available <http://pampl.in/transferecreditsteps>
- Overall and In-Major GPA: Students must have an overall GPA of 2.0 and an in-major GPA of 2.0 to graduate. Courses used to calculate the in-major GPA are noted with a # (e.g. #REAL 1004).
- Policy 91: University policy requires a student to make satisfactory academic progress towards a degree in order to remain enrolled at the institution. Students in the real estate degree program with 30 or more credit hours must enroll in at least one REAL course per semester. Failure to do so may result in the student's dismissal from the real estate degree program. This policy is strictly enforced.

³ Concept 7 must be satisfied if a course is not selected that double counts for Concepts 2 and 7.



VirginiaTech

Program in Real Estate

430A Bishop-Favrao Hall, Virginia Tech (0715)

1345 Perry Street

Blacksburg, Virginia 24061

540.231-6301

kjboyle@vt.edu

<http://www.aaec.vt.edu/people/faculty/boyle-kevin.html>

<http://www.realestate.vt.edu/>

February 19, 2021

RE: Splitting Real BS Real Estate into Two Majors

No additional resources will be required.

Best,

Kevin J. Boyle
Professor and Director

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VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

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Course and Minor Approvals

Accounting

Hello Kevin,

January 21, 2021

I approve your request to include ACIS 2115 on the checksheets for the two new Real Estate majors. Please accept this email as evidence of that approval. ACIS will not require additional resources to handle this request. Good luck with your two new majors.

John Maher

John J. (Jack) Maher
Department Head and
Tom Wells/Kathy Dargo Professor
Dept. of Accounting and Information Systems
Pamplin College of Business - Virginia Tech
Blacksburg, VA 24061
USA

Agricultural and Applied Economics

Kevin,

Thank you for your message. We are happy to have you list AAEC 4754 as a requirement on the two checksheets you indicate below. We are also happy to have you add AAEC 2104 as a choice course for the residential major. Doing so will require no additional resources on the part of AAEC.

Please let me know if there is anything further I (we) can do to assist you in this process.

All the best,

Matt

Matt Holt | Virginia Tech
Professor and Department Head
Ag & Applied Economics
College of Agriculture and Life Sciences
208 Hutcheson Hall Virginia Tech | 250 Drillfield Drive | Blacksburg, VA 24061
Phone: 540-231-6301 | Fax: 540-231-7417 | E-mail: mattholt@vt.edu
Twitter: @MattHoltProf
"Ut Prosim" – That I May Serve

Building Construction

See attached letter.

(School of) Communication

Kevin: The School of Communication supports the inclusion of COMM 2004: Public Speaking as a requirement on the major checksheets for Commercial Real Estate Development and for Investment and Residential Real Estate Development and Investment. Teaching your students will require no additional school or university resources.

Douglas F. Cannon, Ph.D., APR+M, Fellow PRSA
Associate Director, School of Communication
Virginia Polytechnic Institute and State University (Virginia Tech)

English

See attached letter.

Geography

Kevin,

Please use this email as documentation that Geography supports inclusion of GEOG 2084 Principles of GIS in the two majors (commercial and residential) of the BS Real Estate degree.

No new resources are required.

Best,

Tom Crawford

Tom Crawford, PhD
Department Chair & Professor
Department of Geography
(540) 231-7216 | tomc3@vt.edu

Management

Kevin

You have my approval to include MGT 2064, MGT 2354, and the ENVG Minor on the checksheets. No new resources are needed.

Best regards.

Devi

Marketing

Dear Kevin:

I approve use of the course and the minor.

No additional resources are needed.

Thank you and please let me know if you need anything else.

Best regards,

Rajesh

Apparel Housing and Resource Management

Thanks for reaching out, Kevin. I approve the inclusion of the noted AHRM courses on the Program in Real Estate's checksheet and their inclusion will not trigger a need for any new resources.

Best,

Dustin

Urban Affairs and Planning

See attached letter.



MYERS-LAWSON SCHOOL OF CONSTRUCTION
BUILDING CONSTRUCTION
VIRGINIA TECH.

**Department of
Building Construction**
430C Bishop-Favrao Hall (0156)
1345 Perry Street
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Blacksburg, Virginia 24061
P: (540) 818-4603
reichard@vt.edu

TO: Curriculum Committees
FROM: Georg Reichard, Department Head, Building Construction
DATE: January 22, 2021
SUBJECT: Letter of Support for BC 2014

To whom it may concern:

The continuation of using BC 2014 Construction Principles I as an elective to the REAL 2023 checksheets is approved by the department. This will require no additional resources beyond existing teaching faculty in the department.

Sincerely,

Georg Reichard, Ph.D., P.E.
Professor and Head, Department of Building Construction
Associate Director for Research, Myers-Lawson School of Construction
Director, Building Enclosure and Systems Technologies Lab



Department of English
181 Turner St. NW
Shanks Hall 323
Blacksburg, Virginia 24061
540/231-6501

Dear Professor Boyle,

I am writing to approve the changes your program has suggested in its use of English 3764 as a requirement for your two new majors in Commercial Real Estate Development and Investment and Residential Real Estate Development and Investment.

We wish you the best of luck with these new majors.

All the best,

A handwritten signature in black ink, appearing to read 'Rebecca Weaver-Hightower'.

Rebecca Weaver-Hightower
Professor and Chair



VirginiaTech

College of Architecture
and Urban Studies

School of Public and International Affairs

Dr. Mehrzad Boroujerdi, Director
VTRC Office 6-042 (MC0804)
900 N Glebe Rd
Arlington, VA 22203
Voice: 571-858-3110
E-mail: mehrzad@vt.edu

January 21, 2021

Dr. Kevin Boyle
Willis Blackwood Founding Director
Program in Real Estate
Virginia Tech
430A Bishop-Favrao Hall
Blacksburg, VA 24060

RE: SPIA Support for the Housing and Society Pathways Minor

Dear Prof. Boyle,

I am writing in support of the propose splitting of the BS Real Estate into two majors; Commercial Real Estate Development and Investment and Residential Real Estate Development and Investment. The School of Public and International Affairs (SPIA) supports including the following under the Residential Development and Investment

- UAP 3014 Urban Policy and Planning (3 credits)
- Smart and Sustainable Cities minor (SSC)

UAP 3014 is a core course in the Public and Urban Affairs (PUA) degree. The inclusion of this course or the Smart and Sustainable Cities (SSC) Minor within a list of restricted electives for students in the Residential Development and Investment Track is not anticipated to require any additional resources other than the possibility of using a larger classroom at some point in the future. If we begin to have capacity issues with these courses, they will be major restricted during course request and the first week of drop add to ensure students in PUA/SSC are able to register.

As such, I would like to express my support for inclusion of all this in the approval process for the changes you are proposing.

Yours sincerely,

Mehrzad Boroujerdi

Mehrzad Boroujerdi, Director
School of Public and International Affairs

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