

### **Business Information Technology, MC 0235**

880 West Campus Drive Pamplin Hall, Suite 1007 Blacksburg, Virginia 24061 P: (540) 231-6596 www.bit.vt.edu

September 20, 2021

#### **MEMORANDUM**

TO:

Governance Committees and University Registrar

FROM:

Roberta S. Russell, Department Head, Business Information Technology

RE:

Change of option to major: Cybersecurity Management and Analytics

Cybersecurity Management and Analytics (CMA) was approved as an option within the Business Information Technology (BIT) major for the Bachelor of Science in Business degree in 2019 for the graduating class of 2021. In 2021, 50 students graduated within this option. By fall of 2022, 371 BIT students had chosen CMA as their option.

The workforce need for graduates in cybersecurity is dire with 65,000 unfilled jobs in the Washington DC metro area alone (Cyberseek.org, 2021). The focus of CMA, on the *management* of the cybersecurity function and the *analytics* involved in assessing risk, allocating scarce resources, and making strategic business decisions, is essential for protecting customers, business assets and a functioning economy. The top three positions in cybersecurity (cybersecurity analyst, cybersecurity manager and cybersecurity consultant) rely on the skills CMA provides. We see administrative, student recruiting, student placement and reputational advantages in designating CMA as a major, rather than an option.

#### With CMA as a major, we can:

- Focus our curriculum and students more directly on cybersecurity.
- Direct our students from the beginning of their time at Virginia Tech toward cybersecurity activities, field studies and internships.
- Build faculty expertise and attract innovative new faculty in cybersecurity management and analytics
- Gain recognition for our program through rankings and inclusion in directories of cybersecurity education
- Receive data on CMA, separate from BIT, which will help us fine tune our program, communicate
  with our students, provide more accurate placement statistics, and establish a more concentrated
  alumni outreach.
- Have a separate advisory board more in step with the rapidly changing needs of the field
- Compete more easily for grants in cybersecurity education
- Seek more targeted philanthropy and investments in cyber students and faculty
- Attract students to Virginia Tech with a more visible cybersecurity management major
- Restrict courses as needed for the major (which we cannot do for an option) and enact other measures to increase our capacity to serve students
- Allow students to emphasize and display to prospective employers their Cybersecurity
   Management and Analytics education. Options do not appear on a diploma; majors do.

#### Implementation

In submitting this proposal, we consulted with the Associate Registrar for Academic Governance, Mr. Gary Costello; Associate Vice Provost for Degree Innovation and SCHEV Compliance, Ms. Noel Byrd; Pamplin leadership; and the Department of BIT's UG Curriculum Committee. The change from an option to a major rests with university governance and does not require SCHEV approval. The BIT department is proposing that we revise the CMA specialization from an option to a major under the BS in Business degree.

- A checksheet for the new major is attached for approval; effective for UG students entering in Summer 2022.
- No new courses are added in converting the option to a major. The new major in CMA consists of 125 hours, the same as the BIT major with CMA option.
- The BIT department needs no additional resources for changing the option to a major.
- Since no courses are being changed or added to the existing option, other departments are not affected by this move from an option to a major.
- All students in BIT will be informed of this change and an information session will be held to detail how a student might switch from the option to the major if desired.
- Upon approval by governance, students entering Virginia Tech in 2022-2023 will be able to apply directly to the new major.
- The new major will be communicated to students through the Admissions website and through college and department listservs. It will also be published on the department's website and on social media.
- Students currently in the CMA option will be eligible to change to the Cybersecurity Management and Analytics major once it is effective. Since there is no change in the checksheet courses, a change from a BIT major with a CMA option to the CMA major will be smooth and simple. The final semester to declare the CMA option is Spring 2022, since the CMA major is expected to be available for enrollment beginning Summer 2022. The final semester students can graduate with the CMA option is Fall 2027.

Costs of the new program will primarily be marketing and reporting related. The benefits far outweigh administrative costs.

Attached, you will find the following required documents:

- I. Coversheet
- II. A checksheet for the new major effective for UG students entering in Summer of 2022
- III. The previously approved 2021-2022 checksheet for the CMA option
- IV. A memo from the BIT department head asserting that no new resources will be required for the new major

Please do not hesitate to contact me should more information be required.

Roberta S. (Robin) Russell

Professor and Department Head Business Information Technology

rrussell@vt.edu

540-231-6596



# Department of Business Information Technology

880 West Campus Drive Pamplin Hall, Suite 1007 Blacksburg, Virginia 24061 P: (540) 231-6596 rrussell@vt.edu

To:

University Governance Committees

From:

Roberta S. Russell, Department of Business Information Technology

Date:

September 20, 2021

RE:

Cybersecurity Management and Analytics Major

# Conversion of the BIT Cybersecurity Management and Analytics (CMA) option to a major

The Department of Business Information Technology supports the conversion of CMA as an option under the BIT major to a separate major under the Bachelor of Science in Business degree. This change will not require or generate the need for additional departmental resources at his time.

Roberta S. Russell

Professor and Head

Department of Business Information Technology

Tussell



## Department of Business Information Technology Bachelor of Science in Business in Business Information Technology (BSBUSB)

Major: Cybersecurity Management and Analytics (CMA)

For students entering under UG Catalog 2022-2023

YEAR ONE					
FALL SEMESTER	+	Credits	SPRING SEMESTER	+	Credits
ACIS 1504: Introduction to Business Analytics & Business Intelligence <sup>1, 2</sup>	М	3	ACIS 2115: Principles of Accounting <sup>1, 2</sup>		3
MATH 1524: Business Calculus <sup>1, 2</sup>	5f	4	ECON 2005: Principles of Economics <sup>1, 2</sup>		3
MGT 1104: Foundations of Business <sup>2</sup>	М	3	*BIT 2405: Introduction to Business Statistics, Analytics, & Modeling <sup>1, 2</sup>	3 5f	3
ENGL 1105: First-Year Writing or COMM 1015: Communication Skills	1f	3	*ENGL 1106: First-Year Writing or *COMM 1016: Communication Skills		3
PSYC 1004: Introductory Psychology or SOC 1004: Introductory Sociology	М	3	Critical Thinking in the Humanities	2	3
Total		16	Total		15
YEAR TWO	440				
FALL SEMESTER	+	Credits	SPRING SEMESTER	+	Credits
*ACIS 2116: Principles of Accounting1,2	С	3	*#BIT 3414: Operations & Supply Chain Management <sup>2</sup>	С	3
*ECON 2006: Principles of Economics <sup>1,2</sup>	3	3	*#BIT 3424: Introduction to Business Analytics Modeling	М	3
*BIT 2406: Introduction to Business Statistics, Analytics, & Modeling <sup>1, 2</sup>	5a	3	HTM or MGT 2314: Introduction to International Business <sup>2</sup>	С	3
CS 1054: Introduction to Programming in Java or CS 1064: Introduction to Programming in Python or CS 1114: Introduction to Software Design	М	3	Free Elective		3
Reasoning in the Natural Sciences	4	3	Reasoning in the Natural Sciences	4	3
Critique & Practice in the Arts	6a	3	BIT 2104: Careers in Business Information Technology	М	1
Total		18	Total		16
YEAR THREE					NESO N
FALL SEMESTER	*	Credits	SPRING SEMESTER	+	Credits
*#BIT 3434: Advanced Modeling for Business Analytics	М	3	*#BIT/ACIS 3554: Networks, Telecommunications & Security	М	3
*#BIT 3444: Advanced Business Computing & Applications	М	3	*#BIT 4614: Information Security	М	3
*#MKTG 3104: Marketing Management <sup>2</sup>	С	3	*#FIN 3054: Legal & Ethical Environment of Business <sup>2</sup>	С	3
*#MGT 3404: Principles of Management <sup>2</sup>	М	3	*#FIN 3104: Introduction to Finance <sup>2</sup>	С	3
Critique & Practice in Design	6d	3	Free Elective		3
Total		15	Total		15
YEAR FOUR					
FALL SEMESTER	+	Credits	SPRING SEMESTER	+	Credits
*#BIT 4604: Data Governance, Privacy, & Ethics	M/2	3	#BIT 4964: Field Study (approval required)	М	3
*#FIN 4014: Cyber Law & Policy	М	3	*#BIT 4624: Cybersecurity Analytics for Business	М	3
*#BIT 4484: Project Management	М	3	Critical Analysis of Identity & Equity in the U.S. <sup>3</sup> or Free Elective	7	3
*#MGT 4394: Strategic Management <sup>2</sup>	С	3	*#BIT CMA Elective (see page 2)	М	3
Free Elective		3	Advanced/Applied Discourse	1a	3
Total		15	Total		15

+	C = Degree Core Required Course	M = Major Required Course
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#### BIT CMA ELECTIVES (choose one - 3 credit hours)

- \*#ACIS 4684: Information Systems Security & Assurance
- \*#BIT 3514: Systems Analysis & Design
- \*#BIT 3524: Database Management & Design
- \*#BIT 4424: Business Information Visualization & Analytics
- \*#BIT 5114: Crime & Conflict in Cyberspace (requires permission of department)
- \*#BIT 5134: Cybersecurity Program Design (requires permission of department)
- \*#CS 4264: Principles of Computer Security
- \*#ECE 4560: Computer & Network Security Fundamentals
- \*#MATH 4175: Cryptography

#### **GENERAL INFORMATION**

A total of <u>125 credit hours</u> 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. \*BIT 2405). Please refer to the Undergraduate Catalog or academic advisor.

Transferring Courses: Requirements and procedures for transferring courses are available <a href="http://pampl.in/transfercreditsteps.">http://pampl.in/transfercreditsteps.</a>

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. #BIT 3424).

Policy 91: University policy requires a student to make satisfactory academic progress towards a degree in order to remain enrolled at the institution (see footnote 1). Students are responsible for reading and understanding Policy 91 in accordance with Pamplin policies <a href="http://pamplin/policy91">http://pamplin/policy91</a>.

<sup>&</sup>lt;sup>1</sup>Policy 91: Pamplin students in a business degree program must complete eight business courses (ACIS 1504, MATH 1524, ACIS 2115-2116, BIT 2405-2406, and ECON 2005-2006) with a grade of C- or higher by 72 attempted credit hours (or 90 attempted credit hours for students with more than 18 transfer credits). Students who have not met the requirements will be notified upon reaching 72 (or 90) credit hours that they must complete the missing course(s) in the next term(s) of enrollment. Failure to do so may result in the student's dismissal from the business degree program. This policy is strictly enforced.

<sup>&</sup>lt;sup>2</sup> Graduation requirement: Students must achieve a grade of C- or higher in select business courses (ACIS 1504, MATH 1524, ACIS 2115-2116, BIT 2405-2406, ECON 2005-2006, MGT 1104, HTM or MGT 2314, MGT 3404, MKTG 3104, FIN 3104, FIN 3054, BIT 3414, and MGT 4394).

<sup>&</sup>lt;sup>3</sup> Critical Analysis of Identity & Equity in the U.S. may be double-counted with another course (major, option, pathway, or free elective) that is designated as pathway 7. If this pathway is already met, students must take a free elective to meet the 125-credit hour requirement.



### University Registrar

### Department of Business Information Technology Bachelor of Science in Business

Major: Business Information Technology Option: Operations & Supply Chain Management (OSM) For students entering under UG Catalog 2021-2022

YEAR ONE						
FALL SEMESTER	+	Credits		SPRING SEMESTER	+	Credits
ACIS 1504: Introduction to Business Analytics &	М	3		ACIS 2115: Principles of Accounting <sup>1, 2</sup>	М	3
Business Intelligence <sup>1, 2</sup>						
MATH 1524: Business Calculus <sup>1, 2</sup>	5f	4		ECON 2005: Principles of Economics <sup>1, 2</sup>	3	3
MGT 1104: Foundations of Business <sup>2</sup>	М	3		*BIT 2405: Introduction to Business Statistics,	5f	3
				Analytics, & Modeling <sup>1, 2</sup>		
ENGL 1105: First-Year Writing or	1f	3		*ENGL 1106: First-Year Writing or	1f	3
COMM 1015: Communication Skills				*COMM 1016: Communication Skills		
PSYC 1004: Introductory Psychology or	М	3		Critical Thinking in the Humanities	2	3
SOC 1004: Introductory Sociology						
Total		16		Total		15
YEAR TWO						
FALL SEMESTER	+	Credits		SPRING SEMESTER	+	Credits
*ACIS 2116: Principles of Accounting <sup>1, 2</sup>	C	3		*#BIT 3414: Operations & Supply Chain Management <sup>2</sup>	C	3
*ECON 2006: Principles of Economics <sup>1, 2</sup>	3	3		*#BIT 3424: Introduction to Business Analytics	М	3
				Modeling		
*BIT 2406: Introduction to Business Statistics,	5a	3		HTM or MGT 2314: Introduction to International	С	3
Analytics, & Modeling <sup>1, 2</sup>				Business <sup>2</sup>		
CS 1054: Introduction to Programming in Java or	М	3		Critical Thinking in the Humanities	2	3
CS 1064: Introduction to Programming in Python or						
CS 1114: Introduction to Software Design						
Reasoning in the Natural Sciences	4	3		Reasoning in the Natural Sciences		3
Critique & Practice in the Arts	6a	3		BIT 2104: Careers in Business Information Technology	М	1
Total		18		Total		16
YEAR THREE						
FALL SEMESTER	+	Credits		SPRING SEMESTER	+	Credits
*#BIT 3434: Advanced Modeling for Business Analytics	М	3		*#BIT 3464: Enterprise Planning & Control	0	3
*#BIT 3444: Advanced Business Computing &	М	3		*#BIT 4434: Computer Simulation in Business	0	3
Applications						
*#BIT 3454: Business Process Improvement	0	3		*#BIT 4484: Project Management	М	3
#MKTG 3104: Marketing Management <sup>2</sup>	C	3	100	*#FIN 3104: Introduction to Finance <sup>2</sup>		3
*#MGT 3404: Principles of Management <sup>2</sup>	М	3		Advanced/Applied Discourse	1a	3
Total		15		Total		15
YEAR FOUR					1500	
FALL SEMESTER	+	Credits		SPRING SEMESTER	+	Credits
*#BIT 4464: Advanced Supply Chain Management	0	3		*#BIT OSM Elective (see page 2)		3
*#BIT 4474: Global Operations & Information	0	3		*#MGT 4394: Strategic Management <sup>2</sup>	С	3
Technology			100			
#FIN 3054: Legal & Ethical Environment of	С	3		Critical Analysis of Identity & Equity in the U.S. <sup>3</sup> or	7	3
Business <sup>2</sup>				Free Elective		
Critique & Practice in Design	6d	3	19	Free Elective		3
Free Elective		3	100	Free Elective		3
Total		15		Total		15



#### BIT OSM ELECTIVES (choose one - 3 credit hours)

\*#BIT 3514: Systems Analysis & Design

\*#BIT 3524: Database Management & Design

\*#BIT/ACIS 3554: Networks, Telecom, & Security

\*#BIT 4424: Business Information Visualization & Analytics

\*#BIT 4444: Web-Based Decision Support Systems

\*#BIT 4454: Business Analysis Seminar in IT

\*#BIT 4544: Advanced Methods in Business Analytics

\*#BIT 4604: Data Governance, Privacy & Ethics

\*#BIT 4614: Information Security

\*#BIT 4624: Cybersecurity Analytics for Business

#### **GENERAL INFORMATION**

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<sup>&</sup>lt;sup>2</sup> Graduation requirement: Students must achieve a grade of C- or higher in select business courses (ACIS 1504, MATH 1524, ACIS 2115-2116, BIT 2405-2406, ECON 2005-2006, MGT 1104, HTM or MGT 2314, MGT 3404, MKTG 3104, FIN 3104, FIN 3054, BIT 3414, and MGT 4394).

<sup>&</sup>lt;sup>3</sup> Critical Analysis of Identity & Equity in the U.S. may be double-counted with another course (major, option, pathway, or free elective) that is designated as pathway 7. If this pathway is already met, students must take a free elective to meet the 125-credit hour requirement.

From: Sent:	Robert Davidson <rhdx@vt.edu></rhdx@vt.edu>
To:	Monday, February 14, 2022 4:05 PM McCoy, Tracy
Subject:	Re: FW: Cybersecurity Management and Analytics (CMA) Major Proposal
Hi Tracy,	
I consent to all proposed changes	here.
Best,	
On Mon, Feb 14, 2022 at 4:03 PM	McCoy, Tracy < <u>tracym@vt.edu</u> > wrote:
Dr. Davidson,	
I have added DIT/ACIS 2554 to th	on list over the use DIT average to the site. The site
Thave added BIT/ACIS 3334 to th	ne list even though BIT currently teaches it. Thank you.
From: McCoy, Tracy	
Sent: Monday, February 14, 202.  To: Davidson, Robert < rhdx@vt.6	
	nent and Analytics (CMA) Major Proposal
0	
Sending on behalf of Dr. Robe	PΠA KUSSEII.
Good afternoon,	

governance to change the option to a major within the BIT department. This would allow us to track the students by major, restrict certain courses in the major, have the major listed on student diplomas, and be considered in outside rankings by major. We do not anticipate an increase in the number of students in the major (versus the option). Further, there are no changes in the courses that appear on the checksheet for the major (versus the option). The following courses from your department were listed on the CMA 'option' checksheet. We seek your approval to now list them on the CMA 'major' checksheet (attached).
ACIS 1504
ACIS 2115
ACIS 2116
ACIS 3554
ACIS 4684
Would you be so kind as to reply to this email with your consent for including the above listed courses in the CMA major checksheet and that no new resources will be required as a result?
I would appreciate an immediate response as this is time sensitive.
Many thanks,
Robin
Roberta S. (Robin) Russell
Professor and Department Head
Business Information Technology
Pamplin College of Business
Virginia Tec
rrussell@vt.edu

Cybersecurity Management and Analytics (CMA) is currently an option under the BIT major. We are going through

### Tracy J. McCoy, Lead Administrative Manager

Virginia Tech / Business Information Technology (0235)

880 West Campus Drive, Suite 1007

Blacksburg, VA 24061

(540) 231-9630 / tracym@vt.edu

## GO HOKIES!

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Robert H Davidson
Department Head
Associate Professor of Accounting
Virginia Polytechnic Institute and State University
(540) 231-7352 | rhdx@vt.edu

Do not lower your goals to the level of your abilities. Instead, raise your abilities to the height of your goals.

From:

Douglas Cannon <dfcannon@vt.edu>

Sent:

Monday, February 14, 2022 4:06 PM

To:

Russell, Robin; McCoy, Tracy

Subject:

Fwd: FW: Cybersecurity Management and Analytics (CMA) Major Proposal

**Attachments:** 

image001.gif; DOE 2022-2023 BIT-CMA Checksheet.docx

The School of Communication supports the inclusion of COMM 1015-1016: Communication Skills on the checksheet for the proposed Cybersecurity Management and Analytics major. We will need no additional resources to accommodate students from this major in these courses.

#### DOUGLAS F. CANNON, Ph.D., APR+M, Fellow PRSA | Associate Director

Virginia Tech | School of Communication 181 Turner Street N.W., Suite 106 Blacksburg, VA 24061-1063 (540) 231-2331 | dfcannon@vt.edu

----- Forwarded message -----

From: **Denton, Robert** < <a href="mailto:rdenton@vt.edu">rdenton@vt.edu</a>>
Date: Mon, Feb 14, 2022 at 3:55 PM

Subject: FW: Cybersecurity Management and Analytics (CMA) Major Proposal

To: Cannon, Douglas < dfcannon@vt.edu>

From: "McCoy, Tracy" < <a href="mailto:rracym@vt.edu">rracym@vt.edu</a>
Date: Monday, February 14, 2022 at 3:52 PM
To: "Robert E. Denton, Jr." < <a href="mailto:rracym@vt.edu">rracym@vt.edu</a>

Subject: Cybersecurity Management and Analytics (CMA) Major Proposal

Sending on behalf of Dr. Roberta Russell.

Good afternoon,

Cybersecurity Management and Analytics (CMA) is currently an option under the BIT major. We are going through governance to change the option to a major within the BIT department. This would allow us to track the students by major, restrict certain courses in the major, have the major listed on student diplomas, and be considered in outside rankings by major. We do not anticipate an increase in the number of students in the major (versus the option). Further, there are no changes in the courses that appear on the checksheet for the major (versus the option). The following courses from your department were listed on the CMA 'option' checksheet. We seek your approval to now list them on the CMA 'major' checksheet (attached).

Comm 1016
Would you be so kind as to reply to this email with your consent for including the above listed courses in the CMA major checksheet and that no new resources will be required as a result?
I would appreciate an immediate response as this is time sensitive.
Many thanks,
Robin
Roberta S. (Robin) Russell
Professor and Department Head
Business Information Technology
Pamplin College of Business
Virginia Tec
rrussell@vt.edu
540-231-6596
Tracy J. McCoy, Lead Administrative Manager
Virginia Tech / Business Information Technology (0235)

Comm 1015

880 West Campus Drive, Suite 1007

Blacksburg, VA 24061

(540) 231-9630 / tracym@vt.edu

# GO HOKIES!

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DOUGLAS F. CANNON, Ph.D., APR+M, Fellow PRSA | Associate Director

Virginia Tech | School of Communication 181 Turner Street N.W., Suite 106 Blacksburg, VA 24061-1063 (540) 231-2331 | dfcannon@vt.edu

> Many thanks,

From: Cal Ribbens <ribbens@vt.edu> Sent: Wednesday, February 16, 2022 7:51 AM To: McCoy, Tracy Cc: Steve Edwards Subject: Re: Cybersecurity Management and Analytics (CMA) Major Proposal Hi Tracy and Robin, Normally I ask Steve Edwards to review these, but in the interest of time, and given your explanation of no anticipated significant enrollment changes, CS consents to this change. Regards, Cal Ribbens Department Head On 2/14/22 3:54 PM, McCoy, Tracy wrote: > /Sending on behalf of Dr. Roberta Russell./ > Good afternoon, > Cybersecurity Management and Analytics (CMA) is currently an option > under the BIT major. We are going through governance to change the > option to a major within the BIT department. This would allow us to > track the students by major, restrict certain courses in the major, > have the major listed on student diplomas, and be considered in > outside rankings by major. We do not anticipate an increase in the > number of students in the major (versus the option). Further, there > are no changes in the courses that appear on the checksheet for the > major (versus the option). The following courses from your department > were listed on the CMA 'option' checksheet. We seek your approval to > now list them on the CMA 'major' checksheet (attached). > CS 1054 > CS 1064 > > CS 1114 > CS 4264 > Would you be so kind as to reply to this email with your consent for > including the above listed courses in the CMA major checksheet and > that no new resources will be required as a result? > > I would appreciate an immediate response as this is time sensitive.

```
>
> Robin
> */Roberta S. (Robin) Russell/*
> */Professor and Department Head/*
> */Business Information Technology/*
> */Pamplin College of Business/*
> */Virginia Tec/*
> */rrussell@vt.edu <mailto:rrussell@vt.edu>/*
> */540-231-6596 /*
> *Tracy J. McCoy, **//**Lead Administrative Manager*
> Virginia Tech / Business Information Technology (0235)
> 880 West Campus Drive, Suite 1007
> Blacksburg, VA 24061
> (540) 231-9630 / tracym@vt.edu <mailto:tracym@vt.edu>
> GOHOKIES!
> Academic Record Disclosure: You are receiving this information as
> determined by the educational right to know disclosure guidelines of
> the Family Educational Rights and Privacy Act (FERPA). If you are not
> the intended recipient, please do not disclose, copy or distribute
> this information. Please notify the sender immediately by return
> electronic email or telephone at (540) 231-6596. Thank you.
Head, Department of Computer Science
Virginia Tech
https://cs.vt.edu/people/faculty/cal-ribbens.html
https://twitter.com/CalRibbens VTCS
```

From:

Melanie Fox <melaniefox@vt.edu>

Sent:

Monday, February 14, 2022 4:43 PM

Cc:

McCoy, Tracy

Subject:

Re: Cybersecurity Management and Analytics (CMA) Major Proposal

#### Good afternoon,

The Department of Economics approves of this change. If you need a formal letter to this effect, please let me know,

-Melanie Fox

Melanie E. Fox, PhD
Collegiate Assistant Professor
Director of Undergraduate Studies
Virginia Tech | Economics
Pamplin 3057
Blacksburg, VA 24060
(540) 231-4549 | melaniefox@vt.edu

On Feb 14, 2022, at 3:54 PM, Sudipta Sarangi <ssarangi@vt.edu> wrote:

Hi Tracy - I am sending this to Dr. Melanie Fox who is responsible for these decisions.

## best, Sudipta

----- Forwarded message ------

From: McCoy, Tracy < tracym@vt.edu > Date: Mon, Feb 14, 2022 at 3:50 PM

Subject: Cybersecurity Management and Analytics (CMA) Major Proposal

To: Sarangi, Sudipta < ssarangi@vt.edu>

<image001.gif>

Sending on behalf of Dr. Roberta Russell.

Good afternoon,

Cybersecurity Management and Analytics (CMA) is currently an option under the BIT major. We are going through governance to change the option to a major within the BIT department. This would allow us to track the students by major, restrict certain courses in the major, have the major listed on student diplomas, and be considered in outside rankings by major. We do not anticipate an increase in the number of students in the major (versus the option). Further, there are no changes in the courses that appear on the checksheet for the major (versus the option). The following courses from your department were listed on the CMA 'option' checksheet. We seek your approval to now list them on the CMA 'major' checksheet (attached).

Econ 2005
Econ 2006
Would you be so kind as to reply to this email with your consent for including the above listed courses in the CMA major checksheet and that no new resources will be required as a result?
I would appreciate an immediate response as this is time sensitive.
Many thanks,
Robin
Roberta S. (Robin) Russell
Professor and Department Head
Business Information Technology
Pamplin College of Business
Virginia Tec
<u>rrussell@vt.edu</u>
540-231-6596

#### Tracy J. McCoy, Lead Administrative Manager

Virginia Tech / Business Information Technology (0235)

880 West Campus Drive, Suite 1007

Blacksburg, VA 24061

(540) 231-9630 / tracym@vt.edu

# GO HOKIES!

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<image001.gif><DOE 2022-2023 BIT-CMA Checksheet.docx>

From:

Vijay Singal <singal@vt.edu>

Sent:

Tuesday, February 15, 2022 10:14 AM

To:

McCoy, Tracy

Cc:

Russell, Robin; Haun, Crystal

Subject:

Re: Cybersecurity Management and Analytics (CMA) Major Proposal

Tracy, Robin -- this is to confirm that the Finance department has no objection to the inclusion of FIN 3054, 3104, and 4014 on the CMA major checksheet. No additional resources will be required.

Vijay

Vijay Singal, Department Head of Finance Pam 1016, <u>vs@vt.edu</u>, 540-231-7750 (d), 540-231-5904 (o), 540-818-4089 (c)

On Mon, Feb 14, 2022 at 3:59 PM McCoy, Tracy <tracym@vt.edu> wrote:

Sending on behalf of Dr. Roberta Russell.

Good afternoon,

Cybersecurity Management and Analytics (CMA) is currently an option under the BIT major. We are going through governance to change the option to a major within the BIT department. This would allow us to track the students by major, restrict certain courses in the major, have the major listed on student diplomas, and be considered in outside rankings by major. We do not anticipate an increase in the number of students in the major (versus the option). Further, there are no changes in the courses that appear on the checksheet for the major (versus the option). The following courses from your department were listed on the CMA 'option' checksheet. We seek your approval to now list them on the CMA 'major' checksheet (attached).

FIN 4014
Would you be so kind as to reply to this email with your consent for including the above listed courses in the CMA major checksheet and that no new resources will be required as a result?
I would appreciate an immediate response as this is time sensitive.
Many thanks,
Robin
Roberta S. (Robin) Russell
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880 West Campus Drive, Suite 1007

Blacksburg, VA 24061

FIN 3104

(540) 231-9630 / tracym@vt.edu

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From:

Sent:	Monday, February 14, 2022 4:08 PM
To: Subject:	McCoy, Tracy
Subject.	Re: Cybersecurity Management and Analytics (CMA) Major Proposa
Yes you have my approval.	
Phil	
Zheng Xiang, Ph.D.  Department Head & Associate Pr The Howard Feiertag Department Pamplin College of Business, Virgi 362 Wallace Hall 295 West Campus Drive Blacksburg, VA 24061, USA Phone: (540) 231-5515 Fax: (540) 231-8313 Email: philxz@vt.edu htm.pamplin.vt.edu	t of Hospitality and Tourism Management
Website   Blog   Facebook   Insta	agram   <u>Twitter</u>   <u>LinkedIn</u>
** ** ** ** ** ** ** ** ** ** ** ** **	
Editor-in-Chief Journal of Informa	ation Technology & Tourism (SSCI/Scopus)
× 100 m cinci, 300 m a of morning	ation reciniology & rounsin (33Cl/3Copus)

Zheng Xiang <philxz@vt.edu>

On Mon, Feb 14, 2022 at 3:56 PM McCoy, Tracy < <a href="mailto:tracym@vt.edu">tracym@vt.edu</a>> wrote:



Roberta S. (Robin) Russell

**Professor and Department Head** 

**Business Information Technology** 

Pamplin College of Business

Virginia Tec

rrussell@vt.edu

540-231-6596

### Tracy J. McCoy, Lead Administrative Manager

Virginia Tech / Business Information Technology (0235)

880 West Campus Drive, Suite 1007

Blacksburg, VA 24061

(540) 231-9630 / tracym@vt.edu

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From:

Gnyawali, Devi

Sent:

Monday, February 14, 2022 4:40 PM

To:

McCoy, Tracy

Subject:

RE: Cybersecurity Management and Analytics (CMA) Major Proposal

Robin,

I approve the inclusion of the listed MGT course in the new CMA major checksheet. No new resources will be required for it.

Thank you

Devi R. Gnyawali, Ph.D.

Department Head and R.B. Pamplin Professor

Department of Management, Pamplin College of Business

Virginia Tech, Blacksburg, VA, 24061 (mail code 0233)

Email: devi@vt.edu, Phone: 540-231-6353

https://management.pamplin.vt.edu/faculty/directory/gnyawali-devi.html

From: McCoy, Tracy <tracym@vt.edu> Sent: Monday, February 14, 2022 3:41 PM

To: Gnyawali, Devi <devi@vt.edu>

Subject: Cybersecurity Management and Analytics (CMA) Major Proposal

### Sending on behalf of Dr. Roberta Russell.

#### Good afternoon,

Cybersecurity Management and Analytics (CMA) is currently an option under the BIT major. We are going through governance to change the option to a major within the BIT department. This would allow us to track the students by major, restrict certain courses in the major, have the major listed on student diplomas, and be considered in outside rankings by major. We do not anticipate an increase in the number of students in the major (versus the option). Further, there are no changes in the courses that appear on the checksheet for the major (versus the option). The following courses from your department were listed on the CMA 'option' checksheet. We seek your approval to now list them on the CMA 'major' checksheet (attached).

MGT 1104

MGT 2314

MGT 3404

MGT 4394

Would you be so kind as to reply to this email with your consent for including the above listed courses in the CMA major checksheet and that no new resources will be required as a result?

I would appreciate an immediate response as this is time sensitive.

Many thanks,

Roberta S. (Robin) Russell
Professor and Department Head
Business Information Technology
Pamplin College of Business
Virginia Tec
<a href="mailto:trussell@vt.edu">trussell@vt.edu</a>
540-231-6596

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F	_			
$-\mathbf{r}$	or	m.		
	$\mathbf{v}$		•	

Frank May <fmay@vt.edu>

Sent:

Monday, February 14, 2022 4:05 PM

To:

McCoy, Tracy

Subject:

Re: Cybersecurity Management and Analytics (CMA) Major Proposal

Hi Tracy,

Yes, I approve, and no new resources are required.

Best,

Frank

On Mon, Feb 14, 2022 at 3:57 PM McCoy, Tracy < tracym@vt.edu > wrote:



Sending on behalf of Dr. Roberta Russell.

Good afternoon,

Cybersecurity Management and Analytics (CMA) is currently an option under the BIT major. We are going through governance to change the option to a major within the BIT department. This would allow us to track the students by major, restrict certain courses in the major, have the major listed on student diplomas, and be considered in outside rankings by major. We do not anticipate an increase in the number of students in the major (versus the option). Further, there are no changes in the courses that appear on the checksheet for the major (versus the option). The following courses from your department were listed on the CMA 'option' checksheet. We seek your approval to now list them on the CMA 'major' checksheet (attached).

MKTG 3104

Would you be so kind as to reply to this email with your consent for including the above listed courses in the CMA major checksheet and that no new resources will be required as a result?

Roberta S. (Robin) Russell
Professor and Department Head
Business Information Technology
Pamplin College of Business
Virginia Tec
rrussell@vt.edu
540-231-6596
Tracy J. McCoy, Lead Administrative Manager

I would appreciate an immediate response as this is time sensitive.

## GO HOKIES!

(540) 231-9630 / tracym@vt.edu

Blacksburg, VA 24061

880 West Campus Drive, Suite 1007

Virginia Tech / Business Information Technology (0235)

Many thanks,

Robin

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Frank May
Associate Professor of Marketing
Mary F. McVay & Theodore R. Rosenberg Junior Faculty Fellow
2042 Pamplin Hall
Pamplin College of Business
Virginia Tech
Ph: 540-231-7026

fmay@vt.edu

http://marketing.pamplin.vt.edu/people/faculty/may-frank.html

From: Sent: To: Subject:	Jennifer Johnson <jajohnson@vt.edu> Monday, February 14, 2022 3:55 PM McCoy, Tracy Re: Cybersecurity Management and Analytics (CMA) Major Proposal</jajohnson@vt.edu>
Yes, I approve.	
Best,	
Jennifer	
On Mon, Feb 14, 2022 at 3:49 PM	1 McCoy, Tracy < <u>tracym@vt.edu</u> > wrote:
	경 17 : 18 : 18 : 18 : 18 : 18 : 18 : 18 :
Sending on behalf of Dr. Robe	erta Russell.
Good afternoon,	
governance to change the option major, restrict certain courses in rankings by major. We do not all Further, there are no changes in	Analytics (CMA) is currently an option under the BIT major. We are going through in to a major within the BIT department. This would allow us to track the students by the major, have the major listed on student diplomas, and be considered in outside inticipate an increase in the number of students in the major (versus the option). the courses that appear on the checksheet for the major (versus the option). The artment were listed on the CMA 'option' checksheet. We seek your approval to now ecksheet (attached).
Soc 1004	

Would you be so kind as to reply to this email with your consent for including the above listed courses in the CMA major checksheet and that no new resources will be required as a result?

Roberta S. (Robin) Russell	
Professor and Department Head	
Business Information Technology	
Pamplin College of Business	
Virginia Tec	
rrussell@vt.edu	
540-231-6596	
Tracy J. McCoy, Lead Administrative Manager	
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880 West Campus Drive, Suite 1007	
Blacksburg, VA 24061	
(540) 231-9630 / tracym@vt.edu	
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I would appreciate an immediate response as this is time sensitive.

Many thanks,

Robin

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Jennifer A. Johnson, PhD (she/her)

Professor and Chair Department of Sociology McBryde Hall, Office 560A 225 Stanger Street Blacksburg, VA 24060

Email: jajohnson@vt.edu
Office Phone: 540-231-8971

Affiliate with Institute for Women's Health, VCU