

**Addendum  
To the  
2018-2019  
Undergraduate  
Catalog**

# PROGRAMS OF STUDY

## NEW OR UPDATED

### CYBERSECURITY

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#### REQUIREMENTS FOR A BACHELOR OF SCIENCE IN CYBERSECURITY

1.0	Course requirements in Cybersecurity		
	CMPT 120 Introduction to Programming	4 cr	
	CMPT 220 Software Development I	4 cr	
	CMPT 221 Software Development II	4 cr	
	CMPT 230 Software Systems and Analysis	4 cr	
	CMPT 306 Data Communications and Networks	4 cr	
	CMPT 308 Database Management	4 cr	
	CMPT 307 Internetworking	4 cr	
	CMPT 330 System Design	4 cr	
	CMPT 421 Computer Forensics	4 cr	
	CMPT 416 Introduction to Cybersecurity	4 cr	
	CMPT 417 Hacking and Penetration Testing	3 cr	
	CMPT 479 Cybersecurity Project (Capping)	4 cr	
	Two Cybersecurity technical electives chosen from	<u>8 cr</u>	
	CMPT 436 Cryptography		
	CMPT 419 Network Security		
	CMPT 423 Network Visualizaition		
	CMPT 418 Mobile Security		
	CMPT 360 Secure Database Design		
	Credit Requirements in Cybersecurity		55 cr
2.0	Course Requirements in Related Fields		
	BUS 100 Introduction to Business and Management	3 cr	
	MATH 130 Introduction to Statistics	3 cr	
	MATH 241 Calculus I	4 cr	
	MATH 205 Discrete Mathematics	<u>4 cr</u>	
	Credit Requirements in Related Fields		<u>14 cr</u>
	<b>Total Credit Requirements for a Major in Cybersecurity</b>		<b>69 cr</b>
3.0	Core/Liberal Studies Requirements		
3.1	FOUNDATION		
	FYS 101 First-year Seminar	4 cr	
	ENG 120 Writing for College	3 cr	
			7 cr
3.2	DISTRIBUTION		
	Breadth		
	Philosophical Perspectives	3 cr	
	Ethics: CMPT 305 Technology, Ethics, and Society	3 cr	
	Science	3 cr	
	Mathematics	0 cr	(fulfilled by related field req.)
	Literature	3 cr	
	Fine Arts	3 cr	

History	3 cr	
Social Science	3 cr	
Pathway*	12 cr	<u>33 cr</u>
<b>Total Core/Liberal Studies Requirement</b>		<b>40 cr</b>

4.0 Electives (and/or Internship) 11 cr

**Total Credit Requirement for Graduation 120 cr**

\* Breadth and Pathway courses may overlap, but all students must take a total of 36 distribution credits (including related field requirements). Students majoring in Breadth areas may apply a maximum of 6 credits to their distribution total. If applicable to a Pathway, 3 credits may come from disciplines outside of Core Breadth areas. Although foreign language and culture courses are not required within the Core, courses in these fields may be used to fulfill distribution requirements. See the Core/LS Program website for a detailed list of all courses that satisfy distribution requirements.

## RECOMMENDED PROGRAM SEQUENCE FOR A BACHELOR OF SCIENCE IN CYBERSECURITY

### FRESHMAN YEAR

FALL		SPRING	
CMPT 120 Intro to Programming	4 cr	CMPT 220 Software Development I	4 cr
MATH 130 Intro Statistics	3 cr	CMPT 230 Software Systems & Analysis	4 cr
BUS 100 Intro Business	3 cr	MATH 205 Discrete Math	4 cr
ENG 120 Writing for College	3 cr	FYS 101 First Year Seminar	<u>4 cr</u>
PHIL 101 Philosophical Perspectives	<u>3 cr</u>		
	16 cr		16 cr

### SOPHOMORE YEAR

FALL		SPRING	
CMPT 306 Data Communications	4 cr	MATH 241 Calculus I	4 cr
CMPT 221 Software Development II	4 cr	CMPT 307 Internetworking	4 cr
CMPT 308 Database Management	4 cr	CMPT 330 System Design	4 cr
HIST 252 Modern Europe	<u>3 cr</u>	ENG 235 Modern Speculative Fiction	<u>3 cr</u>
	15 cr		15 cr

### JUNIOR YEAR

FALL		SPRING	
CMPT 421 Computer Forensics	4 cr	Cybersecurity Elective	4 cr
CMPT 305 Technology, Ethics, and Society	3 cr	CMPT 417 Hacking & Penetration Testing	3 cr
CMPT 416 Intro to Cybersecurity	4 cr	MUS 120 Theory of Music I	3 cr
PHIL 203 Intro to Logic	3 cr	ENSC 101 Intro to Environmental Issues	<u>3 cr</u>
Gen. Elective	<u>1 cr</u>		
	15 cr		13 cr

### SENIOR YEAR

FALL		SPRING	
CMPT 479 Cybersecurity capping project	4 cr	CMPT 436 Cryptography	4 cr
		Cybersecurity Elective	4 cr
5 cr			General Elective/Internship
General Elective/Internship	4 cr	ECON 210 Innovation in the Hudson Valley	3 cr
ECON 150 Economics of Social Issues	<u>3 cr</u>	REST 209 World Religions	<u>3 cr</u>
	15 cr		15 cr

## EDUCATION

**5 YEAR B.A. – B. S. /MAT (MASTER OF ARTS IN TEACHING) PROGRAM FOR DUAL CERTIFICATION IN ADOLESCENCE EDUCATION (GRADES 7 – 12)**

For highly motivated future teachers, this program leads to dual New York State Initial Teaching Certification in an **Adolescence Education content field (Biology, Chemistry, English, French, Mathematics, Social Studies/History, or Spanish) along with Students with Disabilities, both grades 7-12.** Candidates achieve their Bachelor's Degree (BA or BS) in their content field and become eligible for teaching certification by completing pedagogical coursework and student teaching at the Masters' level.

Candidates begin their 36 credit MAT (Masters of Arts in Teaching) program during their undergraduate senior year by taking 12 credits. The remaining 24 credits of the Master's program are taken in the following sequence: 6 credits of graduate work through a hybrid delivery system in the summer following undergraduate graduation, 12 credits in an on-ground setting for the fall semester, and 6 credits of full-time student teaching the following spring. Candidates formally apply for the MAT program in spring of their junior year.

The Five Year BA – BS/ MAT program is a cohort-based program and is structured for candidates who graduate with their B.A. or B. S. degree in spring.

The Education Department at Marist College is accredited under the National Council for Accreditation of Teacher Education (NCATE) standards through the Council for the Accreditation of Educator Preparation (CAEP) accreditation system.

## **ACCEPTANCE TO THE PROGRAM**

Those seeking Adolescence Education teaching certification in an academic major content field are assigned an education advisor as well as a content faculty advisor. The candidate is to meet with both advisors to design their program of study and ensure that they will meet the requirements for Formal Acceptance in their junior year. Formal Acceptance is based on the following minimum guidelines:

- Complete an application form
- Have a minimum overall 3.0 GPA for undergraduate studies at time of application to the MAT section of the program
- Attach an unofficial undergraduate transcript from all undergraduate studies
- Submit a Résumé
- Submit two letters of recommendation from faculty that are familiar with the academic performance and personality of applicant
- Write an essay outlining their reasons for applying to the program
- Be scheduled for an interview with the Director of Graduate Programs upon submission of all application documents. The interview process includes also two brief written tasks.
- Submit your Graduate Record Exam (GRE) score for review prior to full-time graduate studies

## **PROGRAM REQUIREMENTS**

A candidate must maintain a minimum overall GPA of 3.0 and no more than one grade of C+ in education courses. If at any time the candidate's GPA falls below 3.0, or has more than one grade in the range of C in graduate courses, the candidate will be notified of his/her being subject to academic review. Academic review will result in assignment of probationary status or dismissal.

A candidate on probation is expected to take immediate steps to raise his or her GPA. This can be done by (1) earning enough grades of B+ or A, or (2) retaking the course(s) in which a grade of C+ or below was earned and achieving a B or better in this course. NOTE: while a grade of B in any subsequent course may raise a GPA that is below 3.0, it may not by itself be sufficient to raise the GPA to 3.0 or above. Only one grade of C- or lower is allowed in the MT graduate part of the program.

A candidate is allowed up to 12 credit hours of work to raise his or her GPA above 3.0 after being placed on probation. If after attempting 12 credit hours the GPA has not been raised to 3.0, the candidate will be dismissed from the program. Graduate candidates are held accountable for the following professional dispositions stated in accordance with our Conceptual Framework and teaching standards:

- [1] The candidate values learning.
- [2] The candidate thinks critically and solves problems using evidence.
- [3] The candidate conducts himself/herself as a reflective professional.
- [4] The candidate collaborates and communicates respectfully.
- [5] The candidate deals with others fairly and equitably.
- [6] The candidate commits to individual development and learning for all.

Any dispositions that are in obvious deviation from the teacher candidate dispositions stated in accordance with our Conceptual Framework and teaching standards may result in assignment of probationary status or dismissal. Any candidate who does not demonstrate the dispositions necessary to assume the responsibilities of a classroom teacher will be subject to review by the Educator Preparation Provider Candidate Review Board (EPPCRB) and may be placed on probation or dismissed from the program. The candidate will be informed of any decision or recommendation by the EPPCRB.

## NEW YORK STATE CERTIFICATION

A candidate must successfully complete the Five Year BA – BS/MAT program in order to be eligible for initial teaching certification in both their content field and in Students with Disabilities (both grades 7 - 12). In addition to successfully completing the BA – BS/MAT academic program, the candidate must also pass required New York State assessments and mandated workshops.

Required courses in the undergraduate program leading to initial teaching certification\*:

There are two sets of course requirements leading to dual certification in the student's content area (Biology, Chemistry, English, French, History, Mathematics, or Spanish) and Students with Disabilities.

Set #1 are the following Education course that are taken as an undergraduate:

PSYC 101L Introduction to Psychology	3 cr (credits fulfill Core LS social science)
PSYC 207L Exceptional Child	3 cr
PSYC 318L Psychology of the Adolescent	3 cr
PSYC 372L Psychoeducational Assessment of Educational Disabilities	3 cr
EDUC 101L Foundations of Education	3 cr
EDUC 102L Introduction to Teaching	1 cr
EDUC 150L Learning through Technology	3 cr
EDUC 373N Principles of Teaching Students with Disabilities	3 cr
EDUC 379L Culturally Responsive Education	
<b>OR</b> approved substitute	3 cr
EDUC 410N Participation and Observation	1 cr
Foreign Language**	3-6 cr
<b>Total Education</b>	<b>29-32 cr</b>

Set #2 courses are required by the New York State Education Department for a teacher of students with disabilities to provide a broader background of content in English Language Arts, Mathematics, Science, and Social Studies. The content of these courses should relate to the curriculum taught in secondary education (middle and high schools). Six credits are required in each of the following content areas: English, Mathematics, Science, and Social Studies. Many of these credits are fulfilled by the candidate's major field or careful planning of Core/Pathway courses.

\*with the exception of EDUC 102 Introduction to Teaching, EDUC 410 Observation and Participation, and foreign language a grade of C+ or better is required in all courses.

\*\*six credits of introductory foreign language or three credits of an intermediate foreign language

## RECOMMENDED PROGRAM SEQUENCE FOR CERTIFICATION REQUIREMENTS IN ADOLESCENCE EDUCATION (GRADES 7 - 12)

EDUC 101L Foundations of Education	3 cr
EDUC 102L Introduction to Teaching	1 cr
EDUC 150L Learning through Technology	3 cr
EDUC 373N Principles of Teaching Students w/Disabilities	3 cr
EDUC 379L Culturally Responsive Education <b>OR</b> approved substitute	3 cr
EDUC 410N Participation Observation	3 cr
PSYC 101L Intro to Psychology (for Social Sciences)	3 cr
PSYC 207L The Exceptional Child	3 cr
PSYC 318L Psychology of Adolescent	3 cr
PSYC 372L Psychoeducational Assessment of Educational Disabilities	3 cr
Foreign Language I	3 cr
Foreign Language II	3 cr
NYSED content required course (2)	6 cr

## BIOLOGY EDUCATION

In partnership with the Department of Teacher Education in the School of Social & Behavioral Sciences, the Department of Biology has established a curriculum that leads to initial New York State certification in Adolescence Education with a specialization in Biology. This curriculum, approved by the New York State Education Department, includes courses in biology and the other natural sciences, as well as courses designed to prepare students for a secondary school teaching career. A supervised student teaching experience, arranged by Marist faculty, is included in the Masters' year.

**REQUIREMENTS FOR NEW YORK STATE TEACHER CERTIFICATION IN ADOLESCENCE EDUCATION: BIOLOGY (GRADES 7-12) and STUDENTS WITH DISABILITIES (GRADES 7 – 12)**

Marist College offers a state-approved Five Year BA – BS/MAT (Bachelor and Masters degrees) program leading to initial teacher certification in Adolescence Education: Biology (Grades 7-12) and Students with Disabilities (Grades 7-12). Candidates seeking this certification are encouraged to consult with their academic advisor and the Coordinator of Adolescence Education in the Education Department. Because of the significant number of state certification requirements for this program, it is important that candidates seek such advisement early in their college careers, during the freshman year if possible. Education and related field requirements for Adolescence Education certification can be found on page 106 of 2018-2019 catalog.

#### Program Requirements

Formal Acceptance into the Five Year BA – BS/MAT (Bachelor and Masters degrees) program is based on the following:

- A BIOL (major field) grade-point average of 2.7 or higher with no grade below a C (average calculated based only on BIOL courses that can be applied to the BIOL major). NOTE: transfer students must take 12 credits in upper-level BIOL classes at Marist
- An overall science GPA of 2.5 or higher with no grade below a C (BIOL major field and related field requirements – this includes the required CHEM and MATH courses along with the BIOL courses required for the major)
- Grades of C+ or higher in all required courses for the education certificate (see Education Requirements)

Prior to Formal Acceptance, the student must successfully complete at least 10 credits in upper-level BIOL courses (transfer students must successfully complete at least 8 credits in upper-level BIOL courses at Marist).

Prior to admission to Formal Acceptance, the student must successfully complete all BIOL courses required by the major (transfer students must successfully complete at least 12 credits in upper-level BIOL courses at Marist).

Students interested in the Biology Education degree should contact Dr. Victoria Ingalls (845-575-3000 ext. 2541, or [Victoria.Ingalls@Marist.edu](mailto:Victoria.Ingalls@Marist.edu)).

#### Program Requirements

#### B.S. BIOLOGY

##### Year 1

##### FALL

ENG 120L Writing for College	3
PSYC 101L Intro to Psychology/Core: Social Sci.	3
PHIL101L Philosophical Perspectives	3
BIOL 130L General Biology I	4
CHEM 131L General Chemistry I	<u>4</u>
	17 cr

##### Year 2

##### FALL

EDUC 150N Learning through Technology	3
PSYC 207L The Exceptional Child	3
Core: History L	3
BIOL 211L Plant Biology	4
MATH 241L Calculus	<u>4</u>
	17 cr

##### Year 3

##### FALL

PSYC 372L Psychoed.Assmt.of Educ.Disabilities	3
Foreign Language I L	3
Core: Fine Arts L	3
BIOL 321L Evolution	3
CHEM 201L Intro to Organic Chemistry	3
CHEM 202L Organic Chemistry Lab	<u>1</u>
	16 cr

##### Year 4

##### FALL

BIOL 201L Human Anatomy and Physiology I	4
BIOL 477L Capping	3
BIOL Elective at 300 or 400L level or BIOL 360L Ecology	4
MATA 506N Methods for Incl.Secondary Ed. I	2
MATA 507N Clin.Exp.for Methods for Incl.Secondary Ed I	1
MATA 510N Curric.Strat for Stu.w/Disabilities	<u>3</u>
	17 cr

##### Year 5 - HYBRID

##### SUMMER

MATA 631N Literacy in Content Areas	3
MATA 640N Learning Environments to Support Students' Social & Emotional Needs	<u>3</u>
	6 cr

##### Year 5

##### FALL

##### Year 1

##### SPRING

EDUC 101L Foundations of Education	3
EDUC 102N Introduction to Teaching	1
First Year Seminar L	4
BIOL 131L General Biology II	4
CHEM 132L General Chemistry II	<u>4</u>
	16 cr

##### Year 2

##### SPRING

PSYC 318L Psychology of Adolescent	3
EDUC 410N Partic. & Observation	1
Core: Literature L	3
BIOL 320L Genetics	4
MATH 130L Introduction to Statistics	3
BIOL L course at 300 or 400 level	<u>3</u>
	17 cr

##### Year 3

##### SPRING

EDUC 373N Prin. of Tchg Stu w/Disabilities	3
EDUC 379N Culturally Responsive Education <b>OR</b> approved substitute	3
Core: Ethics – Bioethics L	3
Foreign Language II	3
BIOL 312L Microbiology	<u>4</u>
	16 cr

##### Year 4

##### SPRING

BIOL 202L Human Anatomy and Physiology II	4
Pathway L	3
NYSED content req. – History	3
MATA 565N Data-Based Decision Making for Curriculum and Instruction	3
MATA 630N Lit. for Incl.Secondary Ed.	<u>3</u>
	16 cr

##### Year 5

##### SPRING

MATA 605N Educational Assessment & Evaluation	3	MATA 680N Stu.Tchg Practicum	<u>6</u>
MATA 606N Methods for Incl.Secondary Ed.II	3		6 cr
MATA 610N Transitions & Community-Based Learning	3		
MATA 660N Research: Theory & Application	<u>3</u>		
	12 cr		

## CHEMISTRY EDUCATION

Marist College offers a state-approved Five Year BA – BS/MAT (Bachelor and Masters degrees) program leading to initial teacher certification in Adolescence Education: Chemistry (Grades 7-12) and Students with Disabilities (Grades 7-12). Candidates seeking this certification are encouraged to consult with their academic advisor and the Coordinator of Adolescence Education in the Education Department. Because of the significant number of state certification requirements for this program, it is important that candidates seek such advisement early in their college careers, during the freshman year if possible. Education and related field requirements for Adolescence Education certification can be found on page 106 of 2018-2019 catalog.

## REQUIREMENTS FOR NEW YORK STATE TEACHER CERTIFICATION IN ADOLESCENCE EDUCATION: CHEMISTRY (GRADES 7-12) and STUDENTS WITH DISABILITIES (GRADES 7 – 12)

Marist College offers a state-approved Five Year BA – BS/MAT (Bachelor and Masters degrees) program leading to initial teacher certification in Adolescence Education: Chemistry (Grades 7-12) and Students with Disabilities (Grades 7-12). Candidates seeking this certification are encouraged to consult with their academic advisor and the Coordinator of Adolescence Education in the Education Department. Because of the significant number of state certification requirements for this program, it is important that candidates seek such advisement early in their college careers, during the freshman year if possible. Education and related field requirements for Adolescence Education certification can be found on page 106 of 2018-2019 catalog.

Formal Acceptance into the Five Year BA – BS/MAT (Bachelor and Masters degrees) program is based on the following:

- An overall science GPA of 2.5 or higher with no grade below a C (BIOL major field and related field requirements – this includes the required CHEM and MATH courses required for the major)
- Grades of C+ or higher in all required courses for the education certificate (see Education Requirements)

Prior to Formal Acceptance, the student must successfully complete at least 10 credits in upper-level BIOL courses (transfer students must successfully complete at least 8 credits in upper-level BIOL courses at Marist).

### Program Requirements

### BA CHEMISTRY

#### Year 1

##### FALL

EDUC 102N Introduction to Teaching	1
First Year Seminar L	4
PSYC 101L Intro. to Psych/Core: Social Science	3
CHEM 111L General Chemistry I	3
CHEM 115L General Chemistry Lab	1
MATH 241L Calculus I	<u>4</u>
	16 cr

#### Year 2

##### FALL

EDUC 150N Lrng thru Technology	3
PSYC 207L The Exceptional Child	3
Core: History L	3
CHEM 211L Organic Chemistry	3
CHEM 215L Organic Chemistry Lab	1
PHYS 211L General Physics I	3
PHYS 213L Physics Lab I	<u>1</u>
	17 cr

#### Year 3

##### FALL

PSYC 372L Psychoed.Assmt of Ed.Disabilities	3
Core: Fine Arts	3
Foreign Language I L	3
CHEM 355L Analytical Chemistry	4
CHEM 203L Computational Chemistry	<u>3</u>
	16 cr

#### Year 1

##### SPRING

EDUC 101L Foundations of Education	3
ENG 120L Writing for College	3
PHIL 101L Philosophical Perspectives	3
MATH 242L Calculus II	4
CHEM 112L General Chemistry II	3
CHEM 116L General Chemistry Lab	<u>1</u>
	17 cr

#### Year 2

##### SPRING

PSYC 318L Psychology of Adolescent	3
EDUC 410N Part.& Observation	1
Core: Literature L	3
CHEM 212L Organic Chemistry II	3
CHEM 216L Organic Chemistry Lab II	1
PHYS 212L General Physics II	3
PHYS 214L General Physics Lab II	<u>1</u>
	15 cr

#### Year 3

##### SPRING

EDUC 373N Prin.of Tchg Stu.w/Disabilities	3
EDUC 379N Culturally Responsive Education <b>OR</b> approved substitute	3
Foreign Language II L	3
CHEM 361L Thermodynamics & Kinetics	3
CHEM 474L Research Methods in Chem	4
CHEM 365L Expt. Thermo & Kinetics	<u>1</u>

**Year 4****FALL**

Core: Ethics L	3
CHEM 420L Biochemistry I	3
CHEM 423L Biochemistry I Lab	1
CHEM 362L Quantum & Stat Mechanics	3
MATA 506N Meth.for Incl.Secondary Ed. I	2
MATA 507N Clin.Exp-Methods for Incl.Secondary Ed I	1
MATA 510N Curric. Strat.for Stu.w/Disabilities	<u>3</u>
	16 cr

**Year 4****SPRING**

Pathway #1 L	3
Pathway #2 L	3
NYSED content req. – History	3
MATA 565N Data-Based Decision Making for Curriculum and Instruction	3
MATA 630N Lit. for Incl.Secondary Ed.	<u>3</u>
	15 cr

**Year 5 - HYBRID****SUMMER**

MATA 631N Literacy in the Content Areas	3
MATA 640 Learning Environments to Support Students' Social & Emotional Needs	<u>3</u>
	6 cr

**Year 5****FALL**

MATA 605N Ed. Assmt & Eval.	3
MATA 606N Meth for Incl.Secondary Ed. II	3
MATA 610N Trans & Community-Based Lrng	3
MATA 660N Research: Theory & Application	<u>3</u>
	12 cr

**Year 5****SPRING**

MATA 680N Student Teaching Practicum	<u>6</u>
	6 cr

**ENGLISH EDUCATION****REQUIREMENTS FOR NEW YORK STATE TEACHER CERTIFICATION IN ADOLESCENCE EDUCATION: ENGLISH (GRADES 7-12) and STUDENTS WITH DISABILITIES (GRADES 7 – 12)**

Marist College offers a state-approved Five Year BA – BS/MAT (Bachelor and Masters degrees) program leading to initial teacher certification in Adolescence Education: English (Grades 7-12) and Students with Disabilities (Grades 7-12). Candidates seeking this certification are encouraged to consult with their academic advisor and the Coordinator of Adolescence Education in the Education Department. Because of the significant number of state certification requirements for this program, it is important that candidates seek such advisement early in their college careers, during the freshman year if possible. Education and related field requirements for Adolescence Education certification can be found on page 106 of 2018-2019 catalog.

## Program Requirements

**B.A. ENGLISH****Year 1****FALL**

EDUC 101L Foundations of Education	3
First Year Seminar L	4
PHIL 101L Philosophical Perspectives	3
Foreign Language I L	3
English Foundation course #1 L	<u>3</u>
	16 cr

**Year 2****FALL**

EDUC 150N Learning through Technology	3
PSYC 207L The Exceptional Child	3
Core: Science	3
English Foundation course #4 L	3
English 300 level (200 level for Writing Concentration) L	<u>3</u>
	15 cr

**Year 3****FALL**

PSYC 372L Psychoed. Assmt of Ed.Disabilities	3
Core: Math L	3
NYSED content req. – History	3

**Year 1****SPRING**

EDUC 102N Introduction to Teaching	1
PSYC 101L Intro to Psyc/ Core: Soc.Sci.	3
ENG 120L Writing for College	3
Core: History	3
English Foundation course #2 L	3
English Foundation course #3 L	<u>3</u>
	16 cr

**Year 2****SPRING**

PSYCH 318L Psychology of Adolescent	3
EDUC 410N Participation & Observation	1
Foreign Language II L	3
Core: Fine Arts L	3
English 300 level (200 level for Writing Concentration) L	3
English 300 level L	<u>3</u>
	16 cr

**Year 3****SPRING**

EDUC 373N Prin. of Tchg Stu w/Disabilities	3
EDUC 379N Culturally Responsive Education OR approved substitute	3



English 300 level L	3
English 300 level L	<u>3</u>
	15 cr

**Year 4**

**FALL**

Pathway L	3
English 300 level L	3
English 300 level L	3
MATA 506N Meth for Incl.Secondary Ed. I	2
MATA 507N Clin Exp for Meth for Incl. Secondary Ed I	1
MATA 510N Curric. Strat for Stu w/Disabilities	<u>3</u>
	15 cr

**Year 5 HYBRID**

**SUMMER**

MATA 631N Literacy in the Content Areas	3
MATA 640N Learning Environments to Support Students' Social & Emotional Needs	<u>3</u>
	6

**YEAR 5 FALL**

MATA 605N Educational Assessment & Evaluation	3
MATA 606N Meth for Incl Secondary Ed II	3
MATA 610N Transitions & Community-Based Learning	3
MATA 660N Research: Theory & Application	<u>3</u>
	12 cr

English 300 level L	3
English 300 level L	3
NYSED content req. - Science L	<u>3</u>

**Year 4**

**SPRING**

English 300 level L	3
ENG 477L Capping	3
NYSED content req. – Math L	3
MATA 565N Data-Based Decision	
Making for Curriculum and Instruction	3
MATA 630N Literacy for Inclusive Secondary Education	<u>3</u>
	15 cr

**YEAR 5**

**SPRING**

MATA 680N Student Teaching Practicum	<u>6</u>
	6 cr

**FRENCH EDUCATION**

**REQUIREMENTS FOR NEW YORK STATE TEACHER CERTIFICATION IN ADOLESCENCE EDUCATION: FRENCH (GRADES 7-12) and STUDENTS WITH DISABILITIES (GRADES 7–12)**

Marist College offers a state-approved Five Year BA – BS/MAT (Bachelor and Masters degrees) program leading to initial teacher certification in Adolescence Education: French (Grades 7-12) and Students with Disabilities (Grades 7-12). Candidates seeking this certification are encouraged to consult with their academic advisor and the Coordinator of Adolescence Education in the Education Department. Because of the significant number of state certification requirements for this program, it is important that candidates seek such advisement early in their college careers, during the freshman year if possible. Education and related field requirements for Adolescence Education certification can be found on page 106 of 2018-2019 catalog.

Program Requirements

**B.A. FRENCH**

**Year 1**

**FALL**

First Year Seminar L	4
ENG 120L Writing for College	3
PSYC 101L Intro. to Psychology/Core: Social Science	3
PHIL 101L Philosophical Perspectives	3
FREN 201L Workshop in Writing	<u>3</u>
	16 cr

**Year 2**

**FALL**

EDUC 150N Learning through Technology	3
PSYC 207L The Exceptional Child	3
Core: Math L	3
FREN 250L Fr. Culture & Thought: Prob/Per	3
FREN 305L Studies in French Film & Lit.	<u>3</u>
	15 cr

**Year 3**

**FALL**

Core: Fine Arts L	3
French courses L	<u>12</u>
	15 cr

**Year 1**

**SPRING**

EDUC 101L Foundations of Education	3
EDUC 102N Introduction to Teaching	1
Core: Science L	3
Core: History L	3
FREN 202L Wkshp in Oral Expression	3
NYSED content req. - History	<u>3</u>
	16 cr

**Year 2**

**SPRING**

PSYC 318L Psychology of Adolescent	3
EDUC 410N Participation & Observation	1
Pathway L	3
Pathway L	3
FREN 251L Contemporary France	3
NYSED content req. - Math	<u>3</u>
	16 cr

**Year 3**

**SPRING**

EDUC 379L Culturally Resp Ed or French sub.	3
Core: Ethics L	3
French courses L	<u>9</u>
	15 cr

**Year 4****FALL**

EDUC 373N Prin. of Tchg Stu w/Disabilities	3
NYSED content req. – Science	3
FREN 477L Capping	3
MATA 506N Methods for Inclusive Secondary Education I	2
MATA 507N Clin Exp. for Meth for Inc.Secondary Ed I	1
MATA 510N Curr. Strat for Stu w/Disabilities	<u>3</u>
	15 cr

**Year 4****SPRING**

PSYC 372L Psychoed Assmnt of Ed Disabilities	3
Pathway L	3
French Elective L	3
MATA 565N Data-Based Decision Making for Curriculum and Instruction	3
MATA 630NL Lit for Incl.Secondary Ed	<u>3</u>
	15 cr

**Year 5 HYBRID****SUMMER**

MATA 631N Literacy in the Content Areas	3
MATA 640N Learning Environments to Support Students' Social & Emotional Needs	<u>3</u>
	6 cr

**Year 5****FALL**

MATA 605N Educational Assessment & Evaluation	3
MATA 606N Meth for Incl Secondary Ed II	3
MATA 610N Transitions & Community-Based Lrng	3
MATA 660N Research: Theory & Application	<u>3</u>
	12 cr

**Year 5****SPRING**

MATA 680N Student Teaching Practicum	<u>6</u>
	6 cr

**HISTORY EDUCATION****REQUIREMENTS FOR NEW YORK STATE TEACHER CERTIFICATION IN ADOLESCENCE EDUCATION: SOCIAL STUDIES/HISTORY (GRADES 7-12) and STUDENTS WITH DISABILITIES (GRADES 7 – 12)**

Marist College offers a state-approved Five Year BA – BS/MAT (Bachelor and Masters degrees) program leading to initial teacher certification in Adolescence Education: Social Studies/History (Grades 7-12) and Students with Disabilities (Grades 7-12). Candidates seeking this certification are encouraged to consult with their academic advisor and the Coordinator of Adolescence Education in the Education Department. Because of the significant number of state certification requirements for this program, it is important that candidates seek such advisement early in their college careers, during the freshman year if possible. Education and related field requirements for Adolescence Education certification can be found on page 106 of 2018-2019 catalog.

## Program Requirements

**B.A. HISTORY****Year 1****FALL**

First Year Seminar L	4
ENG 120L Writing for College	3
PSYC 101L Intro. to Psychology/Core: Social Science	3
HIST Any 226L, 227L, 248L, 249L, 252L	3
POSC 110L	<u>3</u>
	16 cr

**Year 2****FALL**

EDUC 150N Learning through Technology	3
PSYC 207L The Exceptional Child	3
HIST Any 226L, 227L, 248L, 249L, 252L	3
HIST 200L Latin America/Asia/Africa	3
ECON 103L OR ECON 105L	<u>3</u>
	15 cr

**Year 3****FALL**

PSYC 372L Psychoed. Assmnt of Ed Disabilities	3
Foreign Language II	3

**Year 1****SPRING**

EDUC 101L Foundations of Education	3
EDUC 102N Introduction to Teaching	1
PHIL 101L Philosophical Perspectives	3
Core: Literature L	3
HIST Any 226L, 227L, 248L, 249L, 252L	3
HIST Any 226L, 227L, 248L, 249L, 252L	<u>3</u>
	16 cr

**Year 2****SPRING**

PSYC 318L Psychology of Adolescent	3
EDUC 410N Participation & Observation	1
Core: Fine Arts L	3
Foreign Language I	3
HIST 200L Latin America/Asia/Africa	3
SOC 391 Geography	<u>3</u>
	16 cr

**Year 3****SPRING**

EDUC 373N Prin of Tchg Stu w/Disabilities	3
EDUC 379N Culturally Responsive Education <b>OR</b>	

Core: Science L	3	approved substitute	3
HIST Elective (200 level) L	3	Core: Ethics L	3
HIST Latin America/Asia/Africa L	<u>3</u>	HIST Elective (300 level) L	3
	15 cr	HIST 413L or 497L	<u>3</u>
			15 cr
<b>Year 4</b>		<b>Year 4</b>	
<b>FALL</b>		<b>SPRING</b>	
Core: Math L	3	Pathway	3
NYSED content req. - Science	3	HIST elective (300 level) L	3
HIST 477L Capping	3	NYSED content req. - Math	3
MATA 506N Meth for Incl.Secondary Ed I	2	MATA 565N Data-Based Decision Making for Curriculum and Instruction	3
MATA 507N Clin Exp for Meth for Incl.Secondary Ed I	1	MATA 630N Lit for Incl Secondary Ed	<u>3</u>
MATA 510N Curr.Strat for Stu w/Disabilities	<u>3</u>		15 cr
	15 cr		
<b>Year 5 HYBRID</b>			
<b>SUMMER</b>			
MATA 631N Literacy in the Content Areas	3		
MATA 640N Learning Environments to Support Students' Social & Emotional Needs	<u>3</u>		
	6 cr		
<b>Year 5 - FALL</b>		<b>Year 5</b>	
MATA 605N Educational Assessment & Evaluation	3	<b>SPRING</b>	
MATA 606N Meth for Incl Secondary Ed II	3	MATA 680N Student Teaching Practicum	<u>6</u>
MATA 610N Transitions & Community-Based Learning	3		6 cr
MATA 660N Research: Theory & Application	<u>3</u>		
	12 cr		

## MATHEMATICS EDUCATION -JOSEPH KIRTLAND, Ph.D., Chairperson

MISSION: The mathematics major at Marist offers a solid grounding in the ideas and techniques of mathematics. During the junior and senior year, the student can use the upper-level elective mathematics courses to tailor the major to career goals. Applied Statistics, Operations Research, and Numerical Analysis emphasize the ideas and methods used in business and industry. Abstract Algebra II, Differential Equations, and Complex Variables emphasize the conceptual understanding of mathematics and the techniques useful in the sciences. In partnership with the Education Department in the School of Social & Behavioral Sciences, the Department of Mathematics has established a mathematics major curriculum that leads to provisional New York State certification in Adolescence Education with a specialization in Mathematics. This curriculum, approved by the New York State Education Department, includes courses in mathematics, as well as courses designed to prepare candidates for a secondary school teaching career. A supervised student teaching experience, arranged by the Education Department, is included in the program's fifth year.

### REQUIREMENTS FOR NEW YORK STATE TEACHER CERTIFICATION IN ADOLESCENCE EDUCATION: MATHEMATICS (GRADES 7-12) and STUDENTS WITH DISABILITIES (GRADES 7 – 12)

Marist College offers a state-approved Five Year BA – BS/MAT (Bachelor and Masters degrees) program leading to initial teacher certification in Adolescence Education: Mathematics (Grades 7-12) and Students with Disabilities (Grades 7-12). Candidates seeking this certification are encouraged to consult with their academic advisor and the Coordinator of Adolescence Education in the Education Department. Because of the significant number of state certification requirements for this program, it is important that candidates seek such advisement early in their college careers, during the freshman year if possible. Education and related field requirements for Adolescence Education certification can be found on page 106 of 2018-2019 catalog.

Program Requirements		B.A. MATHEMATICS	
<b>Year 1</b>		<b>Year 1</b>	
<b>FALL</b>		<b>SPRING</b>	
EDUC 102N Introduction to Teaching	1	EDUC 101L Foundations of Education	3
First Year Seminar L	4	ENG 120L Writing for College	3
PSYC 101L Intro to Psych/Core:for Social Science	3	PHIL 101L Philosophical Perspectives	3
MATH 241L Calculus I	4	Core: Literature L	3
CMPT 120L Intro to Programming or DATA 220L	<u>4</u>	MATH 242L Calculus II	<u>4</u>
	16 cr		16 cr
<b>Year 2</b>		<b>Year 2</b>	
<b>FALL</b>		<b>SPRING</b>	
EDUC 150N Learning through Technology	3	PSYC 318L Psychology of Adolescent	3

PSYC 207L The Exceptional Child	3
Core: Science L	3
MATH 343L Calculus III	4
MATH 210L Linear Algebra	<u>3</u>
	16 cr

**Year 3**

**FALL**

PSYC 372L Psychoed Assmnt of Ed Disabilities	3
Pathway	3
Foreign Language I L	3
MATH 450L Fund. Concepts of Geometry	
(required for teacher certification) OR MATH	
300/400 required	3
MATH 300/400 requirement L	<u>3</u>
	15 cr

**Year 4 - FALL**

NYSED content req. - Science	3
MATH 450L Fund. Concepts of	
Geometry(required for teacher certification)	
OR MATH 300/400 required	3
Math 300/400 requirement	3
MATA 506N Meth for Incl Secondary Ed I	2
MATA 507N Clin Exp for Meth for Incl Secondary Ed I	1
MATA 510N Curr Strat for Stu w/Disabilities	<u>3</u>
	15 cr

**Year 5 HYBRID**

**SUMMER**

MATA 631N Literacy in the Content Areas	3
MATA 640N Learning Environments to	
Support Students' Social & Emotional Needs	<u>3</u>
	6 cr

**Year 5**

**FALL**

MATA 605N Educational Assessment & Evaluation	3
MATA 606N Meth for Inc Secondary Ed II	3
MATA 610N Transitions & Community-Based Learning	3
MATA 660N Research: Theory & Application	<u>3</u>
	12 cr

EDUC 410N Participation & Observation	1
Core: Ethics L	3
Core: History L	3
Core: Fine Arts L	3
MATH 310L Intro to Math Reasoning	<u>3</u>
:	16 cr

**Year 3**

**SPRING**

EDUC 373N Prin of Tchg Stu w/Disabilities	3
EDUC 379N Culturally Responsive Education OR	
approved substitute	3
Foreign Language II L	3
MATH 300/400 requirement L	3
MATH 300/400 requirement L	<u>3</u>
	15

**Year 4**

**SPRING**

Pathway	3
MATH 477L Capping	3
NYSED content req. - History	3
MATA 565N Data-Based Decision	
Making for Curriculum and Instruction	3
MATA 630N Lit for Incl Secondary Ed	<u>3</u>
	15 cr

**SPANISH EDUCATION**

**REQUIREMENTS FOR NEW YORK STATE TEACHER CERTIFICATION IN ADOLESCENCE EDUCATION: SPANISH (GRADES 7-12) and STUDENTS WITH DISABILITIES (GRADES 7 – 12)**

Marist College offers a state-approved Five Year BA – BS/MAT (Bachelor and Masters degrees) program leading to initial teacher certification in Adolescence Education: Spanish (Grades 7-12) and Students with Disabilities (Grades 7-12). Candidates seeking this certification are encouraged to consult with their academic advisor and the Coordinator of Adolescence Education in the Education Department. Because of the significant number of state certification requirements for this program, it is important that candidates seek such advisement early in their college careers, during the freshman year if possible. Education and related field requirements for Adolescence Education certification can be found on page 106 of 2018-2019 catalog.

Passing score on the OPI at a minimum of Advanced Low-Level Proficiency or fulfilling a departmental remediation plan is required for the student/candidate to be recommended for certification.

Program requirements:

**B.A. SPANISH**

**Year 1**

**FALL**

First Year Seminar L	4
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**Year 1**

**SPRING**

EDUC 101L Foundations of Education	3
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ENG 120L Writing for College	3
PSYC 101L Intro.to Psychology/Core: Social Science	3
PHIL 101L Philosophical Perspectives	3
SPAN 201L or SPAN 281L	<u>3</u>
	16 cr

EDUC 102N Introduction to Teaching	1
Core: Science L	3
Core: History L	3
Core: Math L	3
SPAN 201L or SPAN 281L	<u>3</u>
	16 cr

**Year 2**

**FALL**

EDUC 150N Learning through Technology	3
PSYC 207L The Exceptional Child	3
Core: Ethics	3
SPAN 250L Cultures of Spain	3
SPAN 360L or SPAN 315L	<u>3</u>
	15 cr

**Year 2**

**SPRING**

PSYC 318L Psychology of Adolescent	3
EDUC 410N Participation & Observation	1
Pathway	3
SPAN 260L Cultures of Latin America	3
SPAN 315L Exp. Of Hispanic. Literature.	
or SPAN 325L Spanish in a Digital Age	3
NYSED content req. - History	<u>3</u>
	16 cr

**Year 3**

**FALL**

Field Experience/Internship related to location abroad L	1
Core: Fine Arts L	3
Spanish courses L	<u>12</u>
	16 cr

**Year 3**

**SPRING**

NYSED content req. - Math	3
Spanish courses L	9
EDUC 379L Culturally Resp Ed or Span sub	<u>3</u>
	15 cr

**Year 4**

**FALL**

EDUC 373N Prin of Tchg Students w/Disabilities	3
Pathway	3
SPAN 270L or SPAN Literature	
(core literature but not spec. ed certify)	3
MATA 506N Meth for Incl Secondary Ed I	2
MATA 507N Clin Exp for Meth for Incl Secondary Ed I	1
MATA 510N Curr Strat for Students w/Disabilities	<u>3</u>
	15 cr

**Year 4**

**SPRING**

PSYC 372L Psychoed Assesmnt of Ed Disabilities	3
SPAN 477 L Capping	3
NYSED content req. - Science	3
MATA 565N Data-Based Decision	
Making for Curriculum and Instruction	3
MATA 630N Lit for Inc Secondary Ed	<u>3</u>
	15 cr

**Year 5 HYBRID**

**SUMMER**

MATA 631N Literacy in the Content Areas	3
MATA 640N Learning Environments to	
Support Students' Social & Emotional Needs	<u>3</u>
	6 cr

**Year 5**

**FALL**

MATA 605N Educational Assessment & Evaluation	3
MATA 606N Meth for Incl Secondary E II	3
MATA 610N Transitions & Community-Based Learning	3
MATA 660N Research: Theory & Application	<u>3</u>
	12 cr

**Year 5**

**SPRING**

MATA 680N Student Teaching Practicum	<u>6</u>
	6 cr

# COURSE DESCRIPTIONS

## New

CMPT 360

### **Secure Database Design**

*Four Credits*

With the multitude of existing cybersecurity attacks, there is a need for practical database security in practically every major market vertical. This course presents a practical guide to proactive software security for large database systems, as used for electronic commerce applications. Topics include analyzing risks, understanding likely points of attack, and pre-determining how your software will deal with the attack that will inevitably arise. By looking at the systemic threats in any deployment environment and studying the vulnerabilities of your application, this course will show you how to construct software that can deal with various types of database attacks. Techniques such as input validation, zero knowledge proofs, and use of SQL security APIs will be discussed. A comprehensive project, such as developing and securing a multi-user database for online commerce, will be developed by the students to demonstrate concepts and allows students to construct additional examples and practice the concepts in expanding the system design and documentation.

*Prerequisite:* CMPT 416

CMPT 419

### **Network Security**

*Four Credits*

This course should give students a background in the basic tenets, current practices, and future directions in the merging of computer and communications technology with a focus on network security. The student will consider both the physical and logical transfer of data, and will be introduced to international standards such as the OSI architecture, and various network access and Internet standards related to security. The course will emphasize Internet protocols such as TCP/IP. The topics covered will include an analysis of the security related problems and limitations imposed by the physical channel, wireless networks, comparative switching techniques, routing, congestion control, and higher-level protocols needed to complete the end-user to end-user exchange.

*Prerequisite:* CMPT 120, CMPT 220

CMPT 421

### **Computer Forensics**

*Four Credits*

This course deals with computer forensics, the science of identifying and analyzing digital evidence in cybercrimes. This is a comprehensive computer architecture course with an emphasis on cybercrime investigation. Students will study the hardware and software architecture of computer systems, including devices used on the Internet of Things, and learn how to use forensics for cybercrimes that affect individual and corporate privacy. Topics covered include: risks, vulnerabilities, and countermeasures; illegal activities based on traces left on computer hardware and peripherals; uncovering attacks using standard operating system tools. Ethical concerns related to cybersecurity will be addressed. Students will also learn to tackle different forensics situations using digital evidence, and learn how to collect evidence that have legal value, using frameworks such as the open source Linux Caine distro. We will examine the fundamentals of system forensics, including the roles and responsibilities of computer forensics specialists, dealing with computer forensic evidence, and application of forensic analysis skills. Real world examples will be provided to support the course material.

*Prerequisite:* CMPT 120, CMPT 220

CMPT 423

### **Network Virtualization**

*Four Credits*

This course should give students a background in the basic concepts and future directions in the use of cybersecurity and data communication network virtualization. The student will consider the logical partitioning of networking equipment as governed by industry standards. Various network access and Internet standards related to security virtualization will be covered. The course will emphasize virtual local area networks, virtual wide area networks, and software defined network virtualization. The topics covered will include an analysis of the security related problems and limitations imposed by virtualization software, wireless network virtualization, VNICs, VLANs, VWANs, and higher-level protocols needed to complete the end-user to end-user exchange with appropriate security partitioning.

*Prerequisite:* CMPT 120, CMPT 220

CMPT 436

### **Cryptography**

*Four Credits*

This is an introductory course to provide principles of computer systems security to identify threats, explore impacts of technology on security. Students will explore how cryptographic techniques can be used to protect information. Topics covered include: history of cryptography, identification protocols, pseudo-random generation, digital signatures, basic symmetric-key encryption, message integrity, public-key cryptography, as well as real-world examples.

*Prerequisite:* CMPT 416

CMPT 479

### **Cybersecurity Capping Project**

*Four Credits*

This course is the capping course for all Cybersecurity majors. In this course, students will have the opportunity to put into practice the combination of techniques studied throughout the cybersecurity major. Students will implement a complete cybersecurity project, using skills from both Computer Science and ITS. During the course, you will assemble a team for the project, gather project requirements, create and track a project plan, present progress status for the project, implement a working prototype for the project and generate system documentation. At the end of the course you will make a final presentation and deliver the system with the corresponding documentation.

*Prerequisite:* CMPT 416