



**ONTARIO  
SECONDARY  
SCHOOL  
DIPLOMA**

A FULLY REGULATED PUBLIC QUALIFICATION

# OSSD

## Academic Program Development

ENHANCING SKILLS FOR UNIVERSITY ACCEPTANCE



**IfS** **INTELLIGENCE**  
FUTURE SOLUTIONS



**CANADA  
CAMBRIDGE  
ACADEMY**



**DISCOVER**

## Canada Cambridge Academy

Canada Cambridge Academy is an inspected private school from JK-12 under the Ontario Ministry of Education with BSID# 669458.



**IfS INTELLIGENCE**  
FUTURE SOLUTIONS



**CANADA  
CAMBRIDGE  
ACADEMY**

# Welcome To CCA

As a leading educational institution, we are committed to nurturing young minds and fostering a passion for learning in a dynamic, positive and supportive environment.

Empowered by our Ontario curriculum and diverse community, our students graduate as well-rounded individuals ready to thrive in a rapidly evolving world.

[www.canadacambridgeacademy.ca](http://www.canadacambridgeacademy.ca)





# What sets CCA APART?



- 1 Excellence in Academics
- 2 Global Outlook
- 3 Innovation and Technology
- 4 Holistic Development



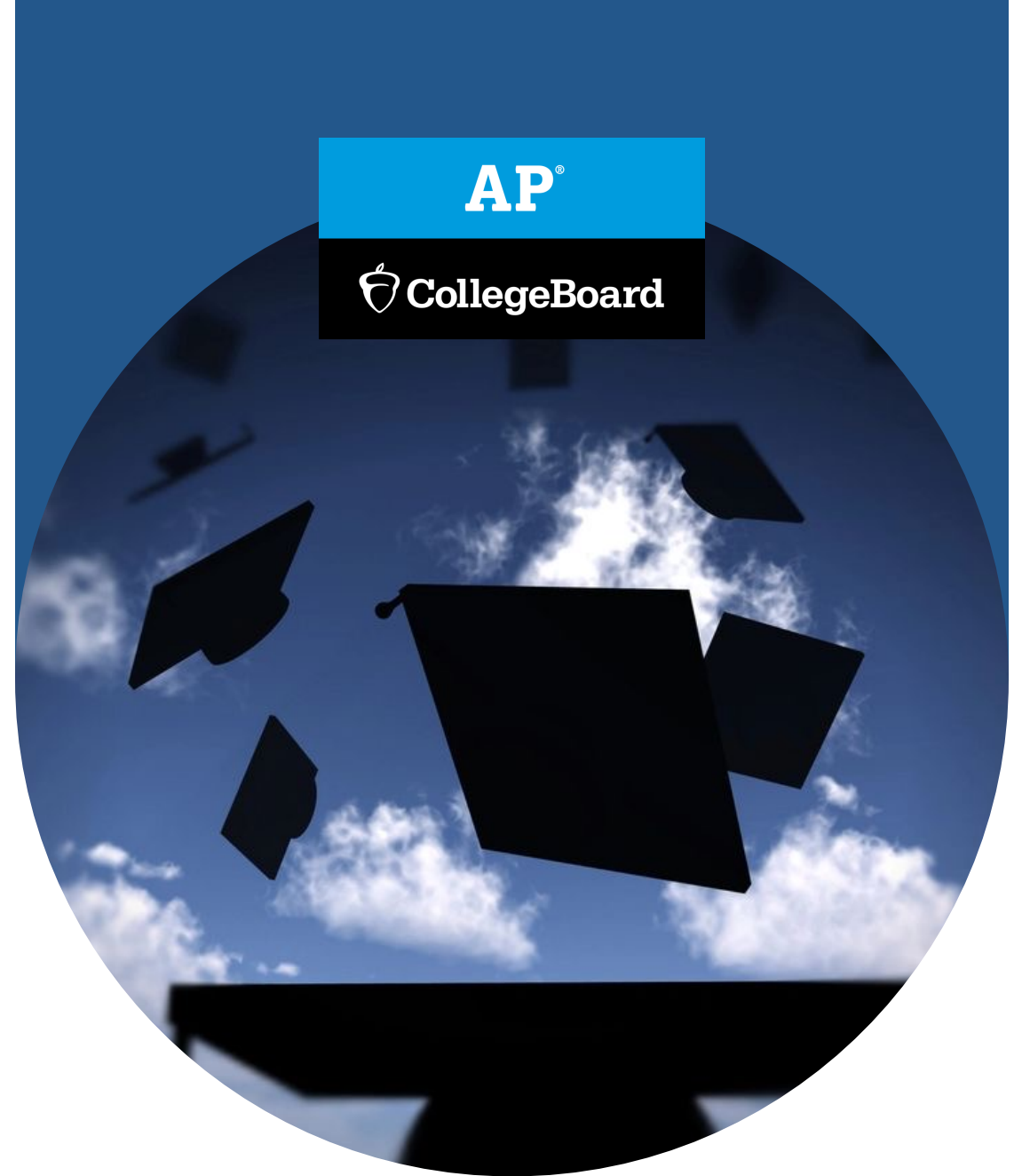
# CCA Latest Learning Methodologies

Canada Cambridge Academy is accredited by the College Board to offer advanced placement courses (College Board Code:823430). Obtaining AP courses will make students able to apply for top universities all over the world such as:

- AP Calculus
- AP Physics
- AP Chemistry
- AP Biology
- AP English Language and Composition

AP<sup>®</sup>

CollegeBoard



# ADVANCED PLACEMENT (AP)

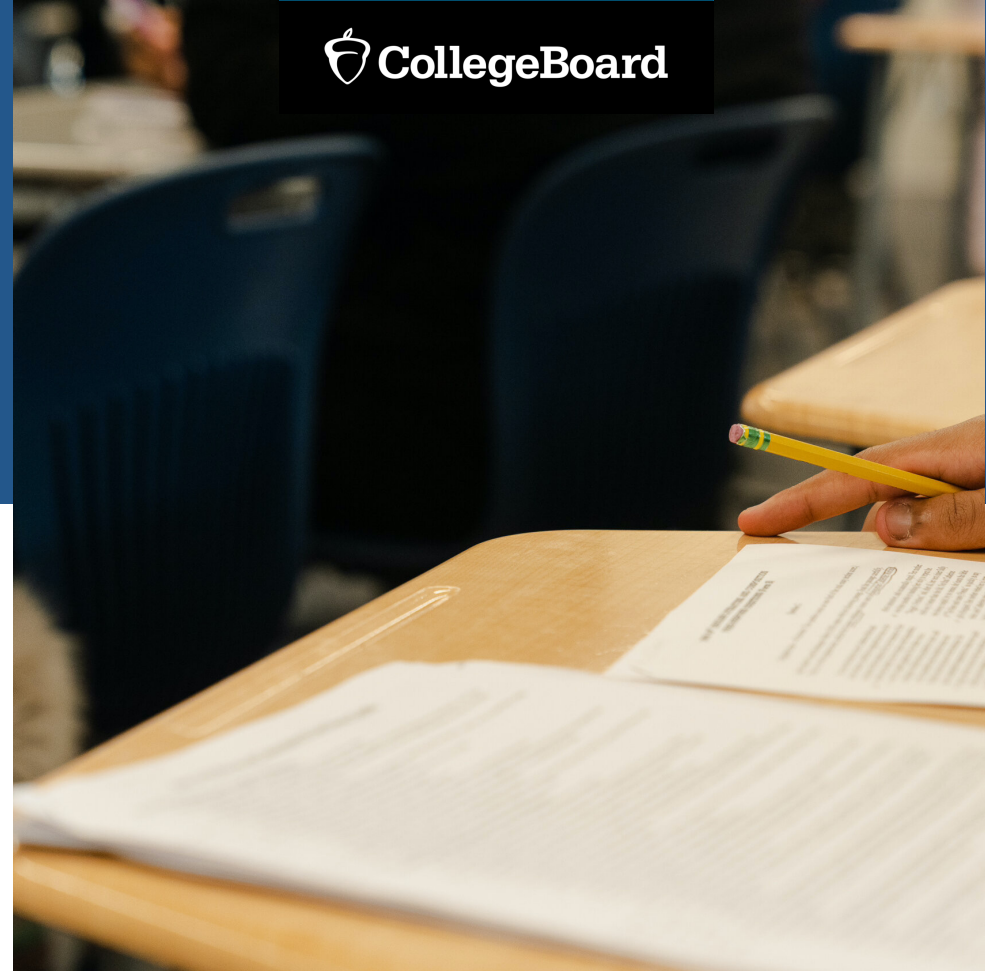
is recognized worldwide for its benefits in helping students:

- Earn College Credit and Placement
- Save Money and Time
- Stand Out to Colleges
- Keep Their Options Open



AP<sup>®</sup>

 CollegeBoard





# ONTARIO SECONDARY SCHOOL DIPLOMA

A FULLY REGULATED PUBLIC QUALIFICATION



## Ontario Secondary School Diploma

OSSD program is an internationally recognized high school diploma from Ontario, Canada. Issued for CCA's graduates which can be used to apply for universities around the world.

The OSSD is highly respected by universities worldwide, making it an excellent choice for students aiming for global higher education opportunities.





# Advantages of OSSD:

- **Recognized globally:** OSSD is widely recognized and respected around the world. It provides students with a competitive edge when applying to universities and colleges internationally.
- **Broad range of subjects:** The OSSD offers a wide range of courses across various disciplines, that align with student's interests and career aspirations.
- **Holistic approach:** At Canada Cambridge Academy, we believe in the holistic development of our students. Our comprehensive co-curricular program goes beyond academics to offer diverse opportunities for:
  - Personal growth
  - Leadership development
  - Community engagement
  - To ensure that students graduate as well-rounded individuals ready to make a positive impact in the world.

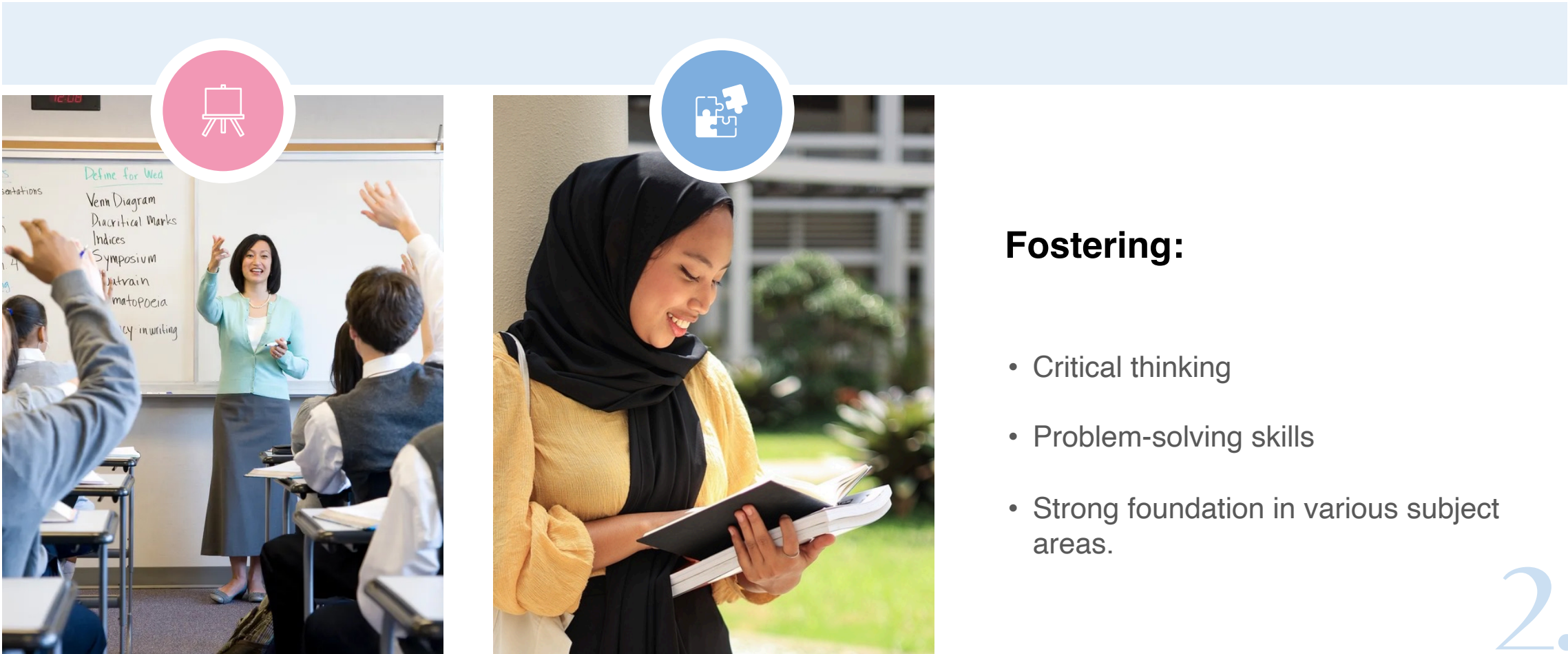


**Greater  
Accessibility.**

# Rigorous Academic Standards:

Challenging and comprehensive academic experience.

Advantages of OSSD:  
Greater Accessibility.







## Fostering:

- Critical thinking
- Problem-solving skills
- Strong foundation in various subject areas.

# Well-Structured Assessment:

The OSSD follows a well-structured assessment framework including a balance of:

-  Coursework
-  Exams
-  Projects
-  Presentations.

This system allows students to demonstrate their understanding, skills, and application of knowledge across different assessment methods.

**Advantages of OSSD:**  
Greater Accessibility.

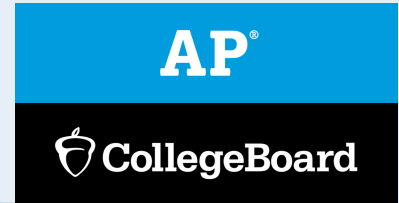




# Possibilities for Advanced Placement:

Many OSSD courses can be taken at the Advanced Placement (AP) level, providing students with the opportunity to earn college credits while still in high school.

**Advantages of OSSD:**  
Greater Accessibility.



# OSSD Program Requirements

To earn an Ontario Secondary school Diploma, students must obtain through their academic journey from grade 9 to 12:



30 credits  
110 hours



19 compulsory  
+ 11 optional subjects



40hrs of community  
involvement



Extensive English  
1 year Program



Year	Course	Code	Grade	Prerequisite	Grade	Credits	Hours	Remarks
2015/16	English 12	ENG12	12	ENG11	87	1.00	18.00	
2016/17	English as a Second Language Level 5	ESL5	11		80	1.00	18.00	X
2017/18	Advanced Functions	MPF4U	12	MPF3U	86	1.00	18.00	
2018/19	Integration of Math - Pure Mathematics	IMP4U	12	IMP3U	86	1.00	18.00	
2019/20	Calculus and Vectors	MCV4U	12	MCV3U	80	1.00	18.00	
2020/21	Advanced Mathematics	MM4U	12	MM3U	87	1.00	18.00	
2021/22	Mathematics of Data Management	MDM4U	12	MDM3U	86	1.00	18.00	

**SUMMARY OF CREDITS** 32.00 18.00



OSSD  
& OST SAMPLE



# Scheme of CCA Courses



## Mathematics

- Mathematics, Gr. 9
- Principles of Mathematics, Gr. 10
- Functions, Gr. 11
- Calculus and Vectors, Gr. 12
- Advanced Functions, Gr. 12
- Data Management, Gr. 12



## English

- English as a Second Language
- Literacy Skills: Reading and Writing
- English, Gr. 9-12
- Ontario Secondary Literacy Course Gr.12
- The Write's Craft Gr.12



## Science

- Science Gr. 9-10
- Physics Gr. 11-12
- Chemistry Gr. 11-12
- Biology Gr. 11-12
- Computer Science Gr. 9-12



## Business

- Introduction to Business Gr.10
- Information and Communication Technology in Business Gr.10
- Financial Accounting Gr.11
- International Business Fundamental Gr. 12
- Business Leadership, Gr. 12



## Social Science and Humanities

- Food and Nutrition Gr. 9
- Issues in Canadian Geography Gr. 9
- Canadian History since World War I, Gr. 10
- Career Studies Gr. 10
- Civic and Citizenship Gr.10
- World Issues Gr. 12
- Challenge and Change in Society Gr. 12
- Nutrition and Health Gr. 12



# Extensive English (1 year) OSSD Program Includes

This program will prepare students  
to sit for IELTS or TOEFL



1

GRAMMAR

2

VOCABULARY

3

READING & WRITING

4

LISTENING & SPEAKING

5

PRESENTATION



## **CCA** **Foundation** **Program**

Students who have already finished their grade 12 either at CCA or other academy can also obtain acceptance from universities abroad through CCA Foundation Program.



# CCA Foundation Program Requirements



8 compulsory subjects



Extensive English  
1 year Program





# Scheme of CCA Courses



## Mathematics

- Calculus and Vectors Gr. 12
- Advanced Functions Gr. 12
- Data Management Gr. 12



## English

- English Gr. 12



## Science

- Physics Gr. 12
- Chemistry Gr. 12
- Biology Gr. 12
- Computer Science Gr. 12



## Business

- International Business Fundamental Gr. 12
- Business Leadership, Gr. 12



## Social Science and Humanities

- World Issues: A Geographic Analysis G. 12
- Canada: History, Identity and Culture Gr. 12

# Extensive English (1 year) Foundation Program Includes

This program will prepare students  
to sit for IELTS or TOEFL



1

GRAMMAR

2

VOCABULARY

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READING & WRITING

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LISTENING & SPEAKING

5

PRESENTATION

# Syllabus

of 3 senior Mathematics courses for Gr. 12

## CALCULUS AND VECTORS

1.

Strand	Overall Expectations
Rate of change	<ol style="list-style-type: none"><li>1.solve problems involving the rate of change, average rate of change and instantaneous rate of change .</li><li>2.solve problems involving the derivative and the application of derivative in real life.</li></ol>
Derivative and Their Applications	<ol style="list-style-type: none"><li>3.demonstrate an understanding of derivative of functions, represent derivatives of functions numerically, graphically, and solve related problems from a variety of applications;</li><li>4.demonstrate an understanding of sketching functions using the concept of extreme values, Min and Max on the given interval; understanding the second derivative of a functions; inflection point and concavity, and solve the real life .</li><li>5. demonstrate the derivative of exponential functions and sketching the function and its derivative to investigate the rate of change for different cases, solve problems related to real life.</li></ol>
Geometry and algebra of Vectors	<ol style="list-style-type: none"><li>6. demonstrate an understanding of vectors in two-space and three-space by representing them algebraically and geometrically and by recognizing their applications;</li><li>7. perform operations on vectors in two-space and three-space, and use the properties of these operations to solve problems, including those arising from real-world applications;</li><li>8. distinguish between the geometric representations of a single linear equation or a system of two linear equations in two-space and three-space, and determine different geometric configurations of lines and planes in three-space;</li><li>9. represent lines and planes using scalar, vector, and parametric equations, and solve problems involving distances and intersections.</li></ol>



# 2.

## MATHEMATICS DATA MANAGEMENT

Strand	Overall Expectations
Counting and probability	1.solve problems involving the probability of an event or a combination of events for discrete sample spaces 2.solve problems involving the application of permutations and combinations to determine the probability of an event
Probability distributions	3.demonstrate an understanding of discrete probability distributions, represent them numerically, graphically, and algebraically, determine expected values, and solve related problems from a variety of applications; 4.demonstrate an understanding of continuous probability distributions, make connections to discrete probability distributions, determine standard deviations, describe key features of the normal distribution, and solve related problems from a variety of application
Organization of data for analysis	5. demonstrate an understanding of the role of data in statistical studies and the variability inherent in data, and distinguish different types of data; 6. describe the characteristics of a good sample, some sampling techniques, and principles of primary data collection, and collect and organize data to solve a problem
Statistical analysis	7. analyze, interpret, and draw conclusions from one-variable data using numerical and graphical summaries 8. analyze, interpret, and draw conclusions from two-variable data using numerical, graphical, and algebraic summaries 9. demonstrate an understanding of the applications of data management used by the media and the advertising industry and in various occupations
Culminating data management investigation	10. design and carry out a culminating investigation that requires the integration and application of the knowledge and skills related to the expectations of this course; 11. communicate the findings of a culminating investigation and provide constructive critiques of the investigations of others

# 3.

## ADVANCED FUNCTIONS

Strand	Overall Expectations
Polynomial and Rational Functions	<ul style="list-style-type: none"> <li>- identify and describe some key features of polynomial functions, and make connections between the numeric, graphical, and algebraic representations of polynomial functions.</li> <li>- identify and describe some key features of the graphs of rational functions, and represent rational functions graphically;</li> <li>- solve problems involving polynomial and simple rational equations graphically and algebraically; - demonstrate an understanding of solving polynomial and simple rational inequalities.</li> </ul>
Exponential and Logarithmic Functions	<ul style="list-style-type: none"> <li>- Demonstrate an understanding of the relationship between exponential expressions and logarithmic expressions, evaluate logarithms, and apply the laws of logarithms to simplify numerical expressions;</li> <li>- identify and describe some key features of the graphs of logarithmic functions, make connections among the numeric, graphical, and algebraic representations of logarithmic functions, and solve related problems graphically</li> <li>- solve exponential and simple logarithmic equations in one variable algebraically, including those in problems arising from real-world applications</li> </ul>
Trigonometric Functions	<ul style="list-style-type: none"> <li>- demonstrate an understanding of the meaning and application of radian measure;</li> <li>- make connections between trigonometric ratios and the graphical and algebraic representations of the corresponding trigonometric functions and between trigonometric functions and their reciprocals, and use these connections to solve problems;</li> <li>- solve problems involving trigonometric equations and prove trigonometric identities</li> </ul>
Characteristics of Functions	<ul style="list-style-type: none"> <li>- demonstrate an understanding of average and instantaneous rate of change, and determine, numerically and graphically, and interpret the average rate of change of a function over a given interval and the instantaneous rate of change of a function at a given point;</li> <li>- determine functions that result from the addition, subtraction, multiplication, and division of two functions and from the composition of two functions, describe some properties of the resulting functions, and solve related problems;</li> <li>- compare the characteristics of functions, and solve problems by modeling and reasoning with functions, including problems with solutions that are not accessible by standard algebraic techniques.</li> </ul>

# Syllabus

## senior Physics courses for Grade 12: University Preparation

Strand	Overall Expectations
B. Kinematics	<p>b1. analyze technological devices that apply the principles of the dynamics of motion, and assess the technologies' social and environmental impact;</p> <p>b2. investigate, in qualitative and quantitative terms, forces involved in uniform circular motion and motion in a plane, and solve related problems;</p> <p>b3. demonstrate an understanding of the forces involved in uniform circular motion and motion in a plane</p>
C. Energy and Momentum	<p>c1. analyze, and propose ways to improve, technologies or procedures that apply principles related to energy and momentum, and assess the social and environmental impact of these technologies or procedures;</p> <p>c2. investigate, in qualitative and quantitative terms, through laboratory inquiry or computer simulation, the relationship between the laws of conservation of energy and conservation of momentum, and solve related problems;</p> <p>c3. demonstrate an understanding of work, energy, momentum, and the laws of conservation of energy and conservation of momentum, in one and two dimensions</p>
D. Gravitational, electric, And magnetic fields	<p>d1. analyze the operation of technologies that use gravitational, electric, or magnetic fields, and assess the technologies' social and environmental impact;</p> <p>d2. investigate, in qualitative and quantitative terms, gravitational, electric, and magnetic fields, and solve related problems;</p> <p>d3. demonstrate an understanding of the concepts, properties, principles, and laws related to gravitational, electric, and magnetic fields and their interactions with matter.</p>
E. The wave nature of light	<p>e1. analyze technologies that use the wave nature of light, and assess their impact on society and the environment;</p> <p>e2. investigate, in qualitative and quantitative terms, the properties of waves and light, and solve related problems;</p> <p>e3. demonstrate an understanding of the properties of waves and light in relation to diffraction, refraction, interference, and polarization. Modern Physics (Quantum physics and Relativity)</p>
F. Revolutions in modern physics: Quantum mechanics and special relativity	<p>f1. analyze, with reference to quantum mechanics and relativity, how the introduction of new conceptual models and theories can influence and/or change scientific thought and lead to the development of new technologies;</p> <p>f2. investigate special relativity and quantum mechanics, and solve related problems</p> <p>f3. demonstrate an understanding of the evidence that supports the basic concepts of quantum mechanics and Einstein's theory of special relativity.</p>



# University Acceptance

We are delighted to inform you that all our students have been able to be admitted to prestigious universities in Canada, United Kingdom, U.S.A, China, and Australia successfully. Our admission team is diligently supporting students to prepare their applications meticulously.





CANADA  
CAMBRIDGE  
ACADEMY

*Congratulations!*

**PennState**  
Undergraduate Admissions

**MyPennState**

Profile Menu Home Apply Academics Risk a Campus Student Life Costs & Aid Info for Post-Admissions

We're excited to see you!

View

**Admission/Decision**

**Congratulations - you have been admitted to Penn State!**

I'm pleased to offer you admission to the College of Arts and Architecture with the honor of regular degree for fall 2022 at Penn State University Park.

By choosing Penn State, you not only join a globally recognized university with the resources of twenty campuses located through the state but you also benefit from an academic community that will challenge you to the highest, research, and resources you need to accomplish your life and career goals. This community, devoted in supporting and inspiring one another, will benefit you for life.

In the New Student Guide, available in MyPennState, you will find instructions for accepting our offer, the conditions of our offer, contact information for offices across the university, and a description of what will occur between the time you accept our offer and your first day of classes. Please note that the deadline to accept your offer to Penn State is May 1, 2021.

Once you have paid your acceptance fees, International Student and Scholar Advising (ISA) will provide instructions to request your visa document (I-20 or CE-20-16). Attach the email from international@psu.edu and send any immigration questions to the ISA team. Orientation and other pre-arrival information will also be emailed to you around this same time.

As you consider your college options, encourage you to learn more about what Penn State can offer you by visiting [admissions.psu.edu/accept](https://admissions.psu.edu/accept).

Congratulations, and welcome to Penn State!

[www.canadacambridgeacademy.ca](http://www.canadacambridgeacademy.ca)



Ontario

Ministry of Education

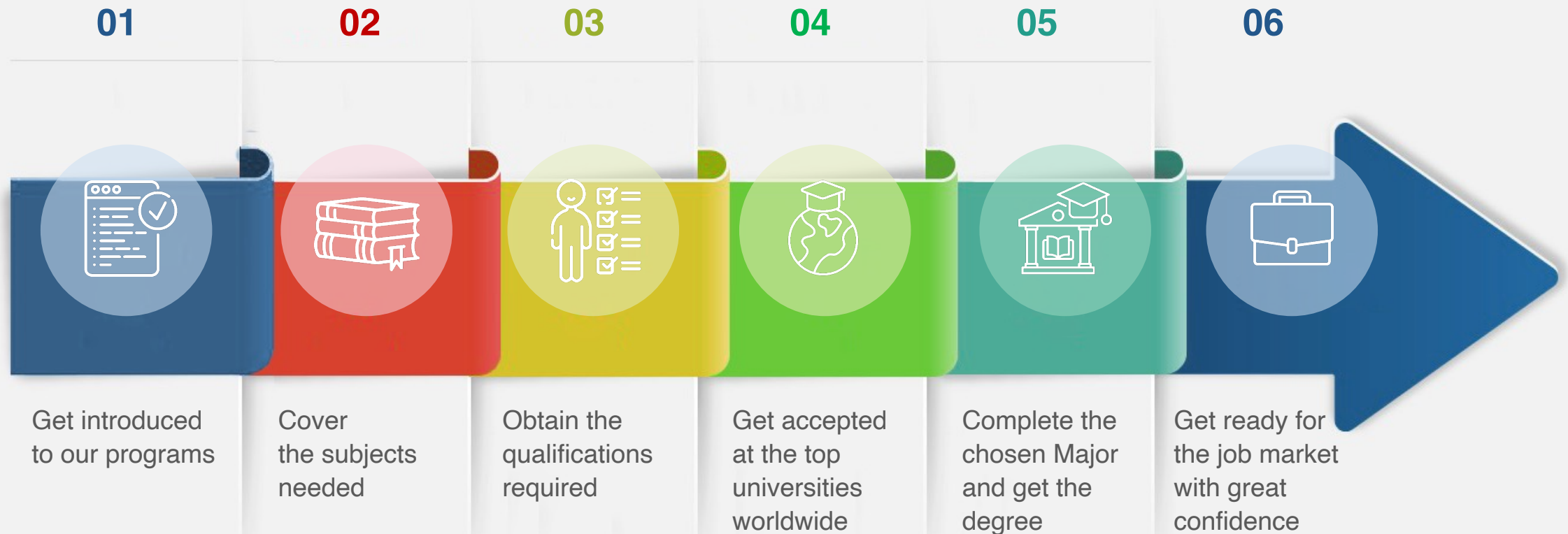
CollegeBoard

AP

# Roadmap to Success:

## From High School to Job Market.

Our Advanced Programs will open new horizons and enable Saudi Students to get accepted at top universities worldwide, thus being qualified with higher ranking for jobs at Saudi Markets.







## Launch a Path to University Success & Empower your Academic Journey



CANADA  
CAMBRIDGE  
ACADEMY



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