



# Multidisciplinary International Baccalaureate Program (700.Z0)

Pre-University Program

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College Education

2021 Version

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**Coordination and content**

Service de la formation préuniversitaire et de la recherche  
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Secteur du développement et du soutien des réseaux

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**English translation**

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Ministère de l'Éducation

**For additional information, contact:**

General Information  
Ministère de l'Enseignement supérieur  
1035, rue De La Chevrotière, 21<sup>e</sup> étage  
Québec (Québec) G1R 5A5  
Telephone: 418-643-7095  
Toll-free: 1-866-747-6626

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## History

|           |  |
|-----------|--|
| Fall 2016 | Initial authorization  |
| Fall 2019 | Replacement of objectives 0030 and 0031 by objectives 02A2, 02A3 and 02A4<br>Replacement of objectives 0043 and 0044 by objectives 02A5 and 02A6<br>Replacement of objective 06DJ by objective 02A8<br>Addition of objectives 02AA, 02AB, 02AC, and 02A7<br>Modification of the objectives related to the prerequisite for admission “Secondary V Mathematics: Technical and Scientific Option or Science Option” (objectives 02A5, 02A6 and 02A7) |
| Fall 2021 | Replacement of 2 optional objectives by equivalent objectives from the <i>Social Science</i> program (300.A1).   |

## DÉFINITION DU PROGRAMME D'ÉTUDES

|   |   |
|---|---|
| <b>Titre du programme</b>                   | Cheminement multidisciplinaire du Baccalauréat International  |
| <b>Type de programme</b>                    | Programme d'études préuniversitaires  |
| <b>Code et version du programme</b>         | 700.Z0 (2021)   |
| <b>Type de sanction</b>                     | Diplôme d'études collégiales  |
| <b>Conditions particulières d'admission</b> | Mathématique, séquence <i>Technico-sciences</i> ou <i>Sciences naturelles</i> de la 4 <sup>e</sup> secondaire ou séquence <i>Culture, société et technique</i> de la 5 <sup>e</sup> secondaire<br>Mathématique, séquence <i>Technico-sciences</i> ou <i>Sciences naturelles</i> de la 5 <sup>e</sup> secondaire pour les objectifs 02A5, 02A6 et 02A7<br><i>Sciences et technologie de l'environnement</i> ou <i>Science et environnement</i> de la 4 <sup>e</sup> secondaire |
| <b>Nombre d'unités</b>                      | 58 ⅔  |
| Formation générale                          | 26 ⅔  |
| Formation spécifique                        | 32  |
| <b>Nombre de périodes d'enseignement</b>    | 1 455   |
| Formation générale                          | 660   |
| Formation spécifique                        | 795   |
| <b>Modifications proposées</b>              | <ul style="list-style-type: none"><li>Remplacement de 2 objectifs facultatifs par les objectifs équivalents du programme d'études <i>Sciences humaines</i> (300.A1).</li></ul>  |
| <b>Session et année d'entrée en vigueur</b> | Implantation facultative : Hiver 2022<br>Implantation obligatoire : Automne 2023  |

## APPROBATION

Recommandations :

  
Sous-ministre adjoint au développement et  
au soutien des réseaux

2021-12-15

Date

  
Sous-ministre

2021-12-15

Date

Approbation de la ministre :



2021-12-16

Date

## DEFINITION OF THE PROGRAM

|   |   |
|---|---|
| <b>Program title</b>  | Multidisciplinary International Baccalaureate Program   |
| <b>Type of program</b>  | Pre-university program  |
| <b>Program code and version</b>   | 700.Z0 (2021)   |
| <b>Type of certification</b>  | Diploma of College Studies  |
| <b>Specific conditions for admission</b>  | Secondary IV Mathematics: <i>Technical and Scientific</i> Option or <i>Science</i> Option, or Secondary V Mathematics: <i>Cultural, Social and Technical</i> Option<br>Secondary V Mathematics: <i>Technical and Scientific</i> Option or <i>Science</i> Option, for the objectives 0030, 0031, 0043 and 0044<br>Secondary IV <i>Environmental Science and Technology</i> or <i>Science and the Environment</i> |
| <b>Number of credits</b>  | 58 ⅔  |
| General education component   | 26 ⅔  |
| Program-specific component  | 32  |
| <b>Number of periods of instruction</b>   | 1 455   |
| General education component   | 660   |
| Program-specific component  | 795   |
| <b>Proposed changes</b>   |   |
| • Replacement of 2 optional objectives by equivalent objectives from the <i>Social Science</i> program (300.A1) |   |
| <b>Term and year in effect</b>  | Optional implementation: Winter 2022<br>Mandatory implementation: Fall 2023   |

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## The Program

The Minister recognizes the *Multidisciplinary International Baccalaureate Program* leading to a Diploma of College Studies.

Detailed information about the program can be obtained from the institutions authorized to offer the program.

The program is made up of a general education component and a program-specific component.

## Program Objectives and Standards

### List of Objectives

#### Program-Specific Component 32 credits, 795 periods of instruction

#### Common Objectives

- MATHEMATICS (201)

- |      |  |
|------|--|
| 02A2 | Apply concepts and principles of differential and integral calculus in the context of the group 5 Mathematics: analysis and approaches higher-level requirements of the International Baccalaureate program, a minimum of $4\frac{1}{3}$ credits           |
| 02A3 | Apply concepts and principles of mathematics other than differential and integral calculus in the context of the group 5 Mathematics: analysis and approaches higher-level requirements of the International Baccalaureate program, a minimum of 5 credits |
| 02A4 | Apply concepts and principles of matrix algebra  |

OR

- |      |   |
|------|---|
| 02AA | Apply concepts and principles of differential and integral calculus in the context of the group 5 Mathematics: applications and interpretation higher-level requirements of the International Baccalaureate program, a minimum of $3\frac{2}{3}$ credits  |
| 02AB | Apply concepts and principles of statistics and probability in the context of the group 5 Mathematics: applications and interpretation higher-level requirements of the International Baccalaureate program, a minimum of $2\frac{2}{3}$ credits  |
| 02AC | Apply concepts and principles of mathematics other than differential and integral calculus and statistics and probability in the context of the group 5 Mathematics: applications and interpretation higher-level requirements of the International Baccalaureate program, a minimum of 3 credits |

OR

- 02A5 Apply concepts and principles of differential and integral calculus in the context of the group 5 Mathematics: analysis and approaches standard-level requirements of the International Baccalaureate program, a minimum of 4 credits
- 02A6 Apply concepts and principles of mathematics other than differential and integral calculus in the context of the group 5 Mathematics: analysis and approaches standard-level requirements of the International Baccalaureate program, a minimum of 4 credits

OR

- 02A5 Apply concepts and principles of differential and integral calculus in the context of the group 5 Mathematics: analysis and approaches standard-level requirements of the International Baccalaureate program, a minimum of 4 credits
- 02A6 Apply concepts and principles of mathematics other than differential and integral calculus in the context of the group 5 Mathematics: analysis and approaches standard-level requirements of the International Baccalaureate program, a minimum of 4 credits
- 02A7 Apply concepts and principles of vector and matrix algebra

OR

- 02A8 Apply concepts and principles of mathematics in the context of the group 5 Mathematics: applications and interpretation standard-level requirements of the International Baccalaureate program

- SOCIAL SCIENCE

- 069K Apply theories, concepts and arguments associated with the nature of individuals and societies as well as their activities in one or more of the group 3 subjects of the International Baccalaureate program

- SCIENCE

- 069N Apply concepts, theories, models and techniques associated with the experimental sciences in one or more of the group 4 subjects of the International Baccalaureate program

## Optional Objectives

- 0035<sup>1</sup> Communicate in a living language in the context of natural sciences according to the group 1 or group 2 language subject area of the International Baccalaureate program, Modern Languages (618)
- 0036 Discuss critically an issue related to natural sciences, according to the group 3 individuals and societies subject area of the International Baccalaureate program
- 0038<sup>2</sup> Apply concepts and principles specific to global issues, according to the profile of a student in the International Baccalaureate program
- 0039<sup>3</sup> Apply methods specific to carrying out a research project in the context of the core requirements of the International Baccalaureate program
- 054X Carry out a creative project
- 069L Develop an appreciation of the diversity of arts across time, place and cultures through one or more of the group 6 subjects of the International Baccalaureate program
- 069M<sup>4</sup> Communicate in a living language in the context of the social sciences, through the group 1 or group 2 language subjects of the International Baccalaureate program, Modern Languages (618)
- 06DK<sup>5</sup> Communicate in a living language in the context of the arts according to the group 1 or group 2 language subject area of the International Baccalaureate program, Modern Languages (618)

Taken from the *Social Science* program (300.A1)

- 0N03 Explain patterns of human behaviour and mental processes from a psychological perspective.
- 0PU1 Explain how biological systems affect homeostasis and human behaviour.

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1. The modern languages in the 600 group are the following: 602 French as a second language, 604 English as a second language, 607 Spanish, 608 Italian, 609 German, 610 Russian, 611 Hebrew, 612 Yiddish, 613 Chinese, 616 Arabic.

2. Objective that can be achieved with courses comprising less than 45 periods of instruction.

3. Objective that can be achieved with courses comprising less than 45 periods of instruction.

4. The modern languages in the 600 group are the following: 602 French as a second language, 604 English as a second language, 607 Spanish, 608 Italian, 609 German, 610 Russian, 611 Hebrew, 612 Yiddish, 613 Chinese, 616 Arabic.

5. The modern languages in the 600 group are the following: 602 French as a second language, 604 English as a second language, 607 Spanish, 608 Italian, 609 German, 610 Russian, 611 Hebrew, 612 Yiddish, 613 Chinese, 616 Arabic.

## **General Education Component** **26<sup>2</sup>/<sub>3</sub> credits, 660 periods of instruction**

### **Common Objectives**

- 002U<sup>6</sup> Discuss critically the role and nature of knowledge in the context of the core requirements of the International Baccalaureate program
- 002V Develop an appreciation of literary texts from different periods and of various genres in the language of instruction in the context of the group 1 requirements of the International Baccalaureate program

### **Optional Objectives**

- 00H8 Discuss critically an issue related to the nature of individuals and societies in one or more of the group 3 subjects of the International Baccalaureate program
- 00H9<sup>7</sup> Communicate in a living language in a range of contexts and for different purposes in one of the group 1 or group 2 languages of the International Baccalaureate program, Modern Languages (618)
- 0H10 Discuss critically and scientifically the concepts and foundations of science in one or more of the group 4 subjects of the International Baccalaureate program
- 4EP0 Analyze physical activity from the standpoint of lifestyle behaviours that promote health
- 4EP1 Improve effectiveness when practising a physical activity
- 4EP2 Demonstrate the ability to manage health-enhancing physical activity

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<sup>6.</sup> Objective that can be achieved with courses comprising less than 45 periods of instruction.

<sup>7.</sup> The modern languages in the 600 group are the following: 602 French as a second language, 604 English as a second language, 607 Spanish, 608 Italian, 609 German, 610 Russian, 611 Hebrew, 612 Yiddish, 613 Chinese, 616 Arabic.

**Objective****Standard**

| <b>Statement of the Competency</b>   | <b>Performance Criteria for the Competency as a Whole</b>  |
|--|--|
| Explain patterns of human behaviour and mental processes from a psychological perspective.   | <ul style="list-style-type: none"> <li>• Appropriate distinction between patterns of human behaviour and mental processes</li> <li>• Proper use of recognized terminology specific to psychology</li> <li>• Attention to the quality of English and the way ideas are expressed</li> </ul>   |
| <b>Elements of the Competency</b>  | <b>Performance Criteria</b>  |
| 1. Recognize the specificity of psychology.  | <ul style="list-style-type: none"> <li>• Accurate recognition of the focus of psychology</li> <li>• Appropriate description of the emergence of psychology in the fields of science and clinical intervention</li> <li>• Relevant description of the common areas of practice in psychology</li> </ul>   |
| 2. Distinguish between various research methods used in psychology.  | <ul style="list-style-type: none"> <li>• Accurate recognition of the characteristics of the different research methods, including the experimental method</li> <li>• Correct association between research methods examined and various objectives of psychology</li> </ul>   |
| 3. Characterize the main recognized theoretical perspectives.  | <ul style="list-style-type: none"> <li>• Appropriate identification of the main proponents and foundations of the classic theoretical perspectives in psychology</li> <li>• Accurate description of the main concepts associated with the classic theoretical perspectives in psychology</li> <li>• Accurate identification of distinctive features and concepts associated with recently recognized theoretical perspectives in psychology</li> </ul> |
| 4. Characterize psychobiological, cognitive and affective processes as well as psychosocial factors at the root of patterns of human behaviour and mental processes. | <ul style="list-style-type: none"> <li>• Accurate description of psychobiological, cognitive and affective processes</li> <li>• Appropriate description of the relationships or interactions between the processes examined</li> <li>• Accurate recognition of the influence of psychosocial factors on the processes examined</li> </ul>  |

- |   |   |
|---|---|
| <p>5. Interpret various patterns of human behaviour and mental processes.</p> | <ul style="list-style-type: none"><li>• Choice of relevant theoretical perspectives, concepts or processes</li><li>• Accurate illustration of the relationship between the theoretical perspectives, concepts or processes selected and patterns of human behaviour or mental processes</li><li>• Establishment of accurate links between the various aspects of psychological knowledge used</li></ul> |
|---|---|

**Learning Activities**

Discipline: Psychology (350)

Periods of instruction: 45 or 60 if objective OME1 is partially achieved

Additional information:

- The course also examines questions or examples based on Québec realities OR emphasizes the development and influence of the discipline in a Québec context.

University Prerequisite

Code: 0PU1

**Objective****Standard****Statement of the Competency****Performance Criteria for the Competency as a Whole**

Explain how biological systems affect homeostasis and human behaviour.

- Appropriate reference to various patterns of human behaviour
- Proper use of relevant concepts and recognized terminology

**Elements of the Competency****Performance Criteria**

1. Represent the cell as the basic structural and functional unit of the human body.

- Appropriate representation of the cellular model, its components and the main related functions
- Appropriate representation of certain membrane transport mechanisms

2. Demonstrate how the endocrine system affects homeostasis and human behaviour.

- Appropriate representation of the structural and functional organization of the endocrine system
- Appropriate description of how hormones act on their target cells
- Appropriate demonstration of how the endocrine system contributes to homeostasis
- Appropriate illustration of the relationship between the activity of the endocrine system and human behaviour

3. Demonstrate how the nervous system affects homeostasis and human behaviour.

- Appropriate representation of the structural and functional organization of the nervous system
- Appropriate representation of neuron physiology and synaptic transmission
- Accurate recognition of the functions of the main regions of the brain
- Appropriate demonstration of how the nervous system contributes to homeostasis
- Appropriate illustration of the relationship between the activity of the nervous system and human behaviour

4. Demonstrate how the reproductive system affects the transmission of inherited characteristics and human behaviour.

- Appropriate representation of the structural and functional organization of the reproductive system
- Appropriate illustration of the relationship between the activity of the regulatory systems and the reproductive system
- Appropriate representation of the mechanisms through which inherited characteristics are transmitted
- Appropriate illustration of the relationship between the activity of the reproductive system and the transmission of inherited characteristics and human behaviour

**Learning Activities**

Discipline: Biology (101)

Periods of instruction: 45

Additional information:

- Learning activities in the laboratory would be appropriate.

**Objective****Standard****Statement of the Competency**

Analyze one's physical activity from the standpoint of a healthy lifestyle.

**Elements of the Competency****Performance Criteria**

|  |   |
|--|---|
| 1. Establish the relationship between one's lifestyle habits and health.   | <ul style="list-style-type: none"> <li>• Proper use of documentation from scientific research or the media</li> <li>• Recognition of the influence of social and cultural factors on the practice of physical activity</li> <li>• Pertinent links made between one's lifestyle habits and the impact they have on health</li> </ul>   |
| 2. Be physically active in a manner that promotes one's health.  | <ul style="list-style-type: none"> <li>• Respect for the rules specific to the physical activity practised</li> <li>• Respect for codes of ethics, safety rules and regulations when being physically active</li> <li>• Respect for one's abilities when practising physical activities</li> </ul>  |
| 3. Recognize one's needs, abilities and motivational factors with respect to regular and sufficient physical activity. | <ul style="list-style-type: none"> <li>• Appropriate use of strategies for the quantitative and qualitative evaluation of one's physical condition</li> <li>• Overall assessment of one's needs and abilities in terms of physical activity</li> <li>• Overall assessment of one's motivational factors with respect to being sufficiently active on a regular basis</li> </ul> |
| 4. Propose physical activities that promote one's health.  | <ul style="list-style-type: none"> <li>• Appropriate choice of physical activities according to one's needs, abilities and motivational factors</li> <li>• Use of clear reasoning to explain the choice of physical activity</li> </ul>   |

**Learning Activities**

|             |                    |
|-------------|--------------------|
| Discipline: | Physical Education |
| Weighting:  | 1-1-1              |
| Credits:    | 1                  |

**Objective****Standard****Statement of the Competency**

Improve one's effectiveness when practising a physical activity.

**Elements of the Competency****Performance Criteria**

|  |   |
|--|---|
| <p>1. Plan an approach to improve one's effectiveness when practising a physical activity.</p>       | <ul style="list-style-type: none"> <li>• Initial assessment of one's abilities and attitudes when practising a physical activity</li> <li>• Statement of one's expectations and needs with respect to the ability to practise the activity</li> <li>• Appropriate formulation of personal objectives</li> <li>• Appropriate choice of the means to achieve one's objectives</li> <li>• Use of clear reasoning to explain the choice of physical activity</li> </ul>   |
| <p>2. Use a planned approach to improve one's effectiveness when practising a physical activity.</p> | <ul style="list-style-type: none"> <li>• Respect for the rules and regulations of the physical activity</li> <li>• Respect for codes of ethics, safety rules and regulations when being physically active</li> <li>• Appropriate use of strategies for the quantitative and qualitative evaluation of one's motor skills</li> <li>• Periodic assessment of one's abilities and attitudes when practising a physical activity</li> <li>• Meaningful interpretation of progress made and the difficulties encountered in the practice of physical activity</li> <li>• Pertinent, periodic and proper adjustments of one's objectives or means</li> <li>• Appreciable improvement in one's motor skills, techniques or complex strategies required by the physical activity</li> </ul> |

**Learning Activities**

|             |                    |
|-------------|--------------------|
| Discipline: | Physical Education |
| Weighting:  | 0-2-1              |
| Credits:    | 1                  |

**Objective****Standard****Statement of the Competency**

Demonstrate one's ability to assume responsibility for maintaining a healthy lifestyle through the continued practice of physical activity.

**Elements of the Competency****Performance Criteria**

|   |  |
|---|--|
| 1. Plan a personal physical activity program.   | <ul style="list-style-type: none"> <li>• Mention of priorities according to one's needs, abilities, and motivational factors with respect to being sufficiently active on a regular basis</li> <li>• Proper and appropriate formulation of personal objectives</li> <li>• Appropriate choice of physical activity or activities to achieve personal objectives</li> <li>• Appropriate planning of the conditions for performing the physical activity or activities in personal program</li> </ul>   |
| 2. Combine the elements of a regular and sufficient practice of physical activity as part of a healthy lifestyle. | <ul style="list-style-type: none"> <li>• Respect for the rules and regulations of the physical activity</li> <li>• Respect for codes of ethics, safety rules and regulations when being physically active</li> <li>• Regular and sufficient practice of a physical activity while maintaining a balance between effectiveness and health-promoting factors</li> </ul>  |
| 3. Manage a personal physical activity program.   | <ul style="list-style-type: none"> <li>• Appropriate choice of criteria for measuring the attainment of program objectives</li> <li>• Appropriate use of strategies for the quantitative and qualitative evaluation of one's physical activity</li> <li>• Periodic assessment of the time invested and activities practised during the program</li> <li>• Appropriate, periodic and proper adjustment of personal objectives or means used</li> <li>• Meaningful interpretation of the progress made and difficulties encountered in the practice of physical activities</li> <li>• Recognition of the effect of physical activity on one's lifestyle</li> </ul> |

**Learning Activities**

|             |                    |
|-------------|--------------------|
| Discipline: | Physical Education |
| Weighting:  | 1-1-1              |
| Credits:    | 1                  |

## **Additional Information**

### Key Terms Used in Pre-University Programs

#### **Program**

A program is an integrated set of learning activities leading to the achievement of educational objectives based on set standards.

#### **Aim**

The aim encompasses all of the academic fields identified in a pre-university program in order to prepare students for university. As a whole, the elements of a program—i.e. the aims of college education, common competencies, goals, objectives and standards—help students meet the educational requirements of these academic fields.

#### **Goals**

The goals of a pre-university program highlight what the students should learn. Program goals contribute to program coherence, which in turn promotes the integration and transfer of learning. They are in keeping with the program-based approach in that they serve to harmonize the program-specific and the general education components, and give concrete expression to the aim of the program.

#### **Competency**

A competency is the ability to act. It includes knowledge, skills and attitudes and refers to the student's demonstrated ability to use his or her knowledge and skills in a given situation.

#### **Objectives**

The objectives of pre-university programs determine the results expected of the students. It is by attaining objectives and meeting set standards that the students master the college-level competencies that are deemed essential to successful university studies. In pre-university programs, each objective is formulated in terms of a statement of the competency and its elements.

#### **Standard**

A standard is the level of performance at which an objective is considered to be achieved. It is by attaining objectives and meeting the required standards that the students master the college-level competencies that are deemed essential to successful university studies. In pre-university programs, each standard is formulated in terms of performance criteria.

#### **Statement of the competency**

The statement of the competency specifies the overall training objective associated with a competency; it is based on expectations identified in an analysis of university education and general education needs.

## **Elements of the competency**

The elements specify the essential components of a competency. They include only what is necessary in order to understand and develop the competency.

## **Performance criteria**

The performance criteria define the requirements for recognition of attainment of a standard. They are not an evaluation framework *per se*, but may serve to develop one. Performance criteria must be taken into account in the evaluation of competency development.

## **Learning activities**

The aspects of learning activities that the Minister can determine, in whole or in part, in a pre-university program include: the field of studies, the discipline(s), the course weighting, the number of periods of instruction, the number of credits, and such specific indications as are deemed essential.

## **Common objectives and standards**

Common objectives and standards determine the core learning content for pursuing university studies in a given field, no matter what specialization a student may have taken.

## **Objectives and standards of an option**

The objectives and standards of an option expose students to an academic field in order to guide them in their university course selection.

## **Optional objectives and standards**

Optional objectives and standards may or may not be implemented by a college. They serve to develop learning activities based on local orientations.

## **Harmonization of Pre-University Programs and General Education**

The harmonization of pre-university programs and general education is part of a lifelong learning approach that makes it easier for college-level students to switch from one pre-university program to another without having to repeat activities for which they have already obtained credit. Additional information on the harmonization of pre-university programs and general education is available on the Ministère's Web site at:

<https://www.quebec.ca/education/cegep/services/programmes/programmes-etudes-preuniversitaires>

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