PhD in Computer Science

FACTORY OF ARTS AND SCIENCES | Département d'Informatique et de Recherche Opérationnelle

Overview and specifics

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>3-175-1-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL</td>
<td>Graduate</td>
</tr>
<tr>
<td>TYPE</td>
<td>Philosophiae Doctor [Ph. D.]</td>
</tr>
<tr>
<td>CREDITS</td>
<td>90 credits</td>
</tr>
</tbody>
</table>

- Admission in fall, winter and summer
- Submit a complete application as early as possible because, after September 1 (for the winter session) and February 1 (for the summer and fall sessions), applications will not be considered if all spaces are filled.
- Day course
- Offered at Montréal
- Full-time
- Half-time
- With international exchange option
- Dissertation or thesis track
- Guaranteed funding for all

Resource persons

PROGRAM INFORMATION

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resp-etudesup@iro.umontreal.ca

Description

Do you have a passion for research? Would you like to have a direct impact on state-of-the-art advancements in the field of computer science? Do you want to work with world-renowned experts in academia and industry on the important problems that will shape the future? Then the PhD in Computer Science is the ideal program for you!

Objectives

Most of this program is devoted to advancing knowledge in this field by conducting research and devising new solutions to important open problems.

The program culminates in a thesis that opens up new avenues of research, while solving an important set of problems in your chosen area of expertise.

Prior to the thesis-writing stage, PhD candidates’ general knowledge of computer science will be evaluated; at a later stage of their training, their knowledge of their chosen area of specialization will also be evaluated. The final evaluation for a PhD involves the defence of the candidate’s work.

Strengths

- The chance to work in a wide range of research laboratories and groups, conducting cutting-edge work in logistics, artificial intelligence, natural language processing, video games and quantum computing, just to name a few.
- Guaranteed financial assistance for all students. Get informed!

Regulations

Students are advised to submit a complete application as early as possible as applications will not be considered if the program’s capacity has been reached.

Studies in this program are governed by the educational regulations of the Faculty of Graduate and Postdoctoral Studies and the following provisions:
1. Admission requirements
To be admitted as a regular student to the PhD (Computer Science) program, candidates must:

- Meet the general admission requirements (section XX) of the “Règlement pédagogique de la Faculté des études supérieures et postdoctorales” [educational regulations of the Faculty of Graduate and Postdoctoral Studies].
- Have an MSc (Computer Science) or a degree that adequately prepares them for their chosen area of study or show proof of equivalent education.
- Have obtained a grade-point average at the graduate level of at least 3.2 out of 4.3 or the equivalent.
- Demonstrate sufficient knowledge of French or English and any other language deemed necessary for their research.

1.1 Additional documents to submit with your application
- The Supervision Consent Form, including a section on financial arrangements.

Application deadlines
Before submitting an application, check the application periods for the chosen session.

Fall
- Fall 2019: From January 1st, 2018 to July 1st, 2019
- Fall 2020: From January 1st, 2019 to February 1st, 2020

Winter
- Winter 2020: From May 1st, 2018 to September 1st, 2019

Programs of origin
Several Université de Montréal students in this program came from the following programs:

<table>
<thead>
<tr>
<th>PROGRAMS</th>
<th>TYPE</th>
<th>CREDITS</th>
<th>NUMBER</th>
<th>PERIOD</th>
<th>ENROLLMENT CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>Master’s Degree</td>
<td>45 credits</td>
<td>2-175-1-0</td>
<td>Jour</td>
<td></td>
</tr>
</tbody>
</table>

Program structure (3-175-1-0)
The doctorate program consists of 90 to 92 credits, to which preparatory education may be added.

Legend: CR: Credit, SC: Schedule, D: Day, E: Evening

<table>
<thead>
<tr>
<th>SEGMENT 70</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of credits: 84 mandatory credits for research and a thesis, and 6 to 8 credits from optional courses.</td>
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</tbody>
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<tr>
<th>Block 70A</th>
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<tbody>
<tr>
<td>Optional – minimum 6 credits, maximum 8 credits</td>
</tr>
<tr>
<td>Level 6000 IFT courses or seminars or any other courses or seminars the department deems essential to the student’s education.</td>
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<table>
<thead>
<tr>
<th>Block 70B Research and thesis</th>
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<tbody>
<tr>
<td>Mandatory – 84 credits</td>
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<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
<th>CRSC</th>
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</thead>
<tbody>
<tr>
<td>IFT 7000</td>
<td>PhD Comprehensive Examination</td>
<td>0</td>
</tr>
<tr>
<td>IFT 7910</td>
<td>Thesis</td>
<td>84</td>
</tr>
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</table>
Programs to explore

Applicants interested in this program also applied to the following programs:

<table>
<thead>
<tr>
<th>PROGRAMS</th>
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<th>CREDITS</th>
<th>NUMBER</th>
<th>PERIOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioinformatics</td>
<td>Doctorate</td>
<td>90 credits</td>
<td>3-468-1-0</td>
<td>Jour</td>
</tr>
<tr>
<td>Communication Sciences</td>
<td>Doctorate</td>
<td>90 credits</td>
<td>3-225-1-0</td>
<td>Jour</td>
</tr>
<tr>
<td>Information Sciences {Archival and Library Sciences}</td>
<td>Doctorate</td>
<td>90 credits</td>
<td>3-055-1-0</td>
<td>Jour</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Doctorate</td>
<td>90 credits</td>
<td>3-190-1-0</td>
<td>Jour</td>
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</table>

Research expertise at a glance

- Discover our professors' different areas of research expertise: http://en.diro.umontreal.ca/research/research-interests/
- Consult our list of research centres, groups, chairs and laboratories: http://en.diro.umontreal.ca/research/groups-laboratories-and-research-centre/

FIND OUT MORE: http://en.diro.umontreal.ca/home/

Professors

Consult the list of the department's faculty members and their specializations: http://en.diro.umontreal.ca/department-directory/professeurs/

Directory of theses and dissertations

Visit Papyrus, Université de Montréal’s institutional repository, to search for research projects by our faculty and researchers as well as theses and dissertations by our students: https://papyrus.bib.umontreal.ca/xmlui/?locale-attribute=en

Research news

Read the latest research news from UdeM: http://nouvelles.umontreal.ca/en/