

Early researcher awards program guidelines

Detailed guidelines on how to apply for the early researcher awards program to get government funding to build a research team.

Background

The early researcher awards program is a discretionary, non-entitlement program that encourages applications from all disciplines. Each award to a leading researcher is a maximum of \$100,000 and must be matched by an additional \$50,000 from the researcher's institution and/or a partner organization.

The funds are to be used over a period of 5 years to fund eligible expenses for a research team of undergraduates, graduate students, post-doctoral fellows, research assistants, associates, and technicians. In addition, up to \$40,000 will be provided by the Ministry to the institution for indirect costs.

The successful <u>ERA</u> applicants in fields of life sciences, and natural science and engineering will be eligible to apply for the 2019 Ontario-China Young Scientist Exchange Program.

Deadlines

Notice of intent (NoI)

The Ontario government requires institutional research offices to email a Notice of Intent (NoI) for each applicant by **4:00 pm Friday, June 1, 2018.**

Submission of a <u>NoI</u> is not binding and will not be assessed by the government. However, the <u>NoI</u> is an important part of the review process as it allows the government to commence the selection of appropriate panel reviewers.

Complete application package

Complete application packages for Round 14 must be received by the government or post-marked on or before **4:00 pm Tuesday, August 7, 2018.**

Eligible applicants

The ERA program is open on a competitive basis to researchers who:

- are full-time faculty or principal investigators who, at the application deadline, are based at an eligible institution
- have started their academic career on or after July 1, 2013
- have completed their first Doctor of Philosophy, Doctor of Veterinary Medicine degree, Medical Doctor or terminal degree on or after July 1, 2008

About eligible interruptions:

- section 8d of the application allows the applicant to provide the review panel with details on interruptions or delays. Failure to provide information will result in the application being deemed ineligible
- research associate positions and post-doctoral fellowships are not considered eligible interruptions
- continued education, required training (e.g. medical training and fellowships), and parental leave are considered eligible interruptions, but <u>must be clearly described in section 8d of the application</u> (<u>http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?</u>
 <u>OpenForm&ACT=RDR&TAB=PROFILE&SRCH=1&ENV=WWE&TIT=0026&NO=009-0026E</u>).</u>
 Specific dates are required. Failure to provide information will result in the application being deemed ineligible

Additional notes for applicants:

- researchers may be awarded only 1 <u>ERA</u> during their career, however, researchers who are not successful may submit an application in a later competition, providing they continue to meet all eligibility requirements
- researchers who are, or have been, Tier 1 Canada Research Chairs are not eligible to apply for an ERA
- the Government of Ontario generally defines an independent academic research appointment as a position where a researcher is capable of independently publishing, supervising, and applying for funding
- to be competitive, researchers are encouraged to be actively involved in conducting research that has been supported by peer-reviewed funding and to demonstrate academic independence from previous supervisors

Eligible institutions

Eligible institutions include the following publicly funded research Institutions:

- Ontario publicly-assisted universities
- Ontario colleges of applied arts and technology
- Ontario research hospital
- not-for-profit research institutions affiliated with an Ontario university or hospital, excluding those funded primarily by business or industry
- other Ontario not-for-profit research institutions at the discretion of the Ontario Research Fund Advisory Board

A not-for-profit research institution seeking eligibility for <u>ERA</u> funding must demonstrate that:

- it is not an agency of the federal government, a provincial government, a territorial government, or a forprofit organization
- it has capacity to conduct research
- it does not receive ongoing operating funding from the province

Where an institutional eligibility to apply for <u>ERA</u> funding may be in question, such institutions must request and receive confirmation of eligibility from the Ontario Research Fund Advisory Board.

The following organizations will not be considered eligible and cannot apply for, or receive, ERA funding:

- · for-profit organizations and agencies of for-profit entities
- federal departments, departmental corporations, parent Crown corporations, or wholly-owned subsidiaries of parent Crown corporations
- provincial or territorial departments, agencies, or Crown corporations, as defined in the Government Agency Establishment and Accountability Directive (except for universities, colleges, other educational institutions, or hospitals)

• non-profit corporations that have been established by any of the above

Researchers employed by federal, provincial or territorial government departments or agencies and for-profit organizations are not eligible to apply for <u>ERA</u> funding as Principal Investigators unless they hold an eligible institution academic appointment, in which case, the eligible institution must agree to be the applicant.

Funds contributed by the <u>ERA</u> for approved projects are disbursed to the eligible lead research institution. All research supported by <u>ERA</u> funds must be conducted in Ontario at an eligible institution.

Partner contributions

Eligible partner contributions:

The institution is responsible for ensuring that the partner contribution is in place at the time the award is taken up:

- partner contributions must be in cash
- university scholarships for undergraduates, graduate students and fellowships to post-doctoral fellows on the research team, as well as private or public sector contributions, are eligible
- contributing partners must submit proof of their contribution using the Ministry's matching letter template

Ineligible partner contributions include:

- teaching assistantships
- start-up funds from the institution intended to assist newly-appointed faculty members launch their research careers
- awards administered by federal granting councils such as Natural Sciences and Engineering Research Council, Canadian Institutes of Health Research, Social Sciences and Humanities Research Council
- specific purpose grants received from Ontario government ministries and agencies, and funds leveraged by such grants
- Ontario graduate scholarships
- Ontario graduate fellowships

Expenditures

Eligible expenditures

The \$100,000 from the <u>ERA</u> and the \$50,000 matching contribution will cover the following expenses for undergraduates, graduate students, post-doctoral fellows, research assistants, associates, and technicians carrying out the research:

- salaries and benefits
- · essential and reasonable travel and expenses related to conferences, workshops or seminars
- essential and reasonable travel and expenses related directly to offsite research activities
- the amount paid to graduate students and post-doctoral fellows must be in keeping with the levels established by other award programs. Salaries must be commensurate with institutional remuneration scales. Undergraduates, graduate students, post-doctoral fellows, research assistants, associates, and technicians must be based in Ontario

Eligible expenses for youth outreach:

All project activities are to be free to youth and the general public. Therefore, no registration or admission fees can be charged and project activities cannot be incorporated into an existing program for which an admission or

registration fee is applied. Eligible expenses include the following:

- the costs of coordinating, developing and delivering youth outreach activities such as speaking opportunities, lecture series, workshops and demonstrations, student competitions and lab mentorships; and
- consumable lab supplies and the development of working models

Eligible indirect costs:

• costs involved in maintaining research facilities and infrastructure, including items such as heat, electrical power, libraries, computer networks and administration

Note: All costs must be managed with a view to economy, practicality and appropriateness.

Eligible associated expenses:

- police record checks
- job advertisements
- publication costs
- accommodations for off-site research
- lab user fees

The associated costs are only meant for the research team, not the principal investigator. Facilities are not eligible associated costs.

Ineligible expenditures

Funds received through this grant cannot be spent on:

- salary, benefits or expenses of the researcher
- the purchase of supplies or equipment
- the operation of equipment and facilities
- salaries or expenses of individuals performing contract research (where the contractor owns the intellectual property)
- visiting fellows
- salaries, benefits or expenses of ineligible team members

Ineligible expenses for youth outreach

- expenses paid to a third party to coordinate, develop or deliver youth outreach activities;
- the development of magazines, books, curriculum documents, courses or multi-media, including new websites;
- the purchase of commercially available equipment, such as computers or software, or to stage conferences; or
- honoraria or salaries for high school student co-operative education or summer high school student positions;
- hospitality and catering costs at events

How to apply

There are four steps to apply:

1. Step 1: Notify your research office that you plan to apply.

- 2. Step 2: A <u>Notice of Intent (http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?</u> <u>OpenForm&ACT=RDR&TAB=PROFILE&SRCH=&ENV=WWE&TIT=0027&NO=009-0027E</u>] is to be submitted by your research office via email by 4 pm **Friday, June 1, 2018.**
- 3. Step 3: Prepare the documents for your application package following the program guidelines
- 4. Step 4: Complete application packages must be submitted by your research office to the Government of Ontario with post-mark on or before 4 pm **Tuesday**, **August 7**, **2018**.

Complete application package (paper copies and electronic copies) must be assembled in the order detailed below and include all of the following:

- 1. <u>Matching letter (http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?</u> <u>OpenForm&ACT=RDR&TAB=PROFILE&SRCH=&ENV=WWE&TIT=0031&NO=009-0031E</u>) from the institution and/or private sector partner
- 2. a copy of the completed and signed <u>Application form</u> (<u>http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?</u> <u>OpenForm&ACT=RDR&TAB=PROFILE&SRCH=1&ENV=WWE&TIT=0026&NO=009-0026E</u>)
- 3. appendix A Completed budget table
- 4. appendix B Proposed research (maximum of 5 pages including appendices, excluding references)
- 5. appendix C research productivity and recognition researcher's full Curriculum Vitae (CV)
- 6. three reference letters

Applicants must submit both paper and electronic copy (memory stick).

Paper copy should include:

- 1 original signed and complete ERA application including appropriate appendices (A, B and C)
- 3 original letters of reference that were sent to the institutions directly from the referees
- the original application must be signed by the Vice-President of Research or any other officer of the institution with the authority to bind the institution

Electronic copy should include:

- 1 copy of the **ERA application form only** in a pdf document with the appropriate appendices B and C embedded in the document
- 1 electronic copy of the three reference letters

Applications should be sent to:

Early Researcher Awards Program Ministry of Research, Innovation and Science Science and Research Branch 56 Wellesley Street West, 11th Floor Toronto, Ontario M7A 2E7

Preparing your application

Application formatting

Follow the instructions below on how to prepare your application:

- fill in the templates that are provided in the application form
- only include information or number of pages indicated in the relevant sections of the application form
- use clear language and avoid technical jargon. All technical terms must be internationally understood
- funding amounts should be in Canadian dollars, with no cents

- text must be single-spaced, with no more than six lines per inch
- Arial 12 point font must be used in Appendixes B and C
- margins for Appendix B proposed research must be standard (1" x 1")
- the application should be printed, double-sided, on 8 1/2" x 11" white paper
- print must be in black and of letter quality
- Applications should not be bound or stapled. Binder clips are acceptable and preferred.

Note: Failure to follow the formatting instructions above will result in the application being deemed ineligible.

Do not include:

- any additional letters (including matching letters outside of the templates provided)
- information that does not fit within the stated limits
- any additional information after the deadline
- any additional text included in Appendix A

CV formatting instructions

Applicants must submit a customized CV formatted in the following order:

- 1. personal information
- 2. education
- 3. recognitions
- 4. user profile
- 5. employment history
- 6. research funding history
- 7. activities
 - student/postdoctoral supervision
 - editorial activities
 - international collaboration
 - committee memberships
- 8. contributions (you are only required to complete each category if applicable)
 - presentations
 - interview and media relations
 - publications and citations
 - artistic performances/exhibits
 - intellectual property

Follow these formatting instructions to prepare your CV:

- begin with the most recent
- start each entry on a new line
- list all research contributions, using separate headings to identify peer-reviewed journals, books, conference proceedings, invited lectures and presentations, technical reports, theses, and other publications
- for published contributions, list the full authorship as it appears in the original publication, year, title, name and volume of the publication, and the first and last page numbers
- for publications in press, indicate the date of acceptance
- for publications submitted, indicate the journal to which they were submitted
- separate submitted from accepted publications. Do not include papers in preparation
- use asterisks to indicate students who are co-authors on the contributions listed
- · list any patents indicating which patents are applied for and which are granted
- list any other examples of research productivity
- list other evidence of recognition, such as a prize, or leadership of a committee etc.

• list past trainees and indicate current employment/academic status

Letters of Reference

The application package **must include three original signed letters of reference. Letters of reference need to be sent to the institution's research office directly**. The institution will submit the letters to the Ministry along with the corresponding application package.

- the letters should address all the <u>ERA</u> Evaluation Criteria: Excellence of the Researcher, Quality of the Research, Development of Research Talent, and Strategic Value for Ontario
- referees should have access to the applicant's research proposal and full CV
- 1 of the reference letters must be from a former supervisor, mentor, collaborator or corporate sponsor familiar with the researcher
- 2 of the reference letters **must be from arm's length sources** (i.e., arm's length referees must not have a conflict of interest by having a personal link with the researcher, or by being, currently, or within the last **five years**, a colleague, a research collaborator or a corporate sponsor of the researcher)
- it is recommended that the **arm's length letters** be from researchers of **international stature** familiar with the researcher's work
- submit only three (3) reference letters. Any letters from referees not identified on the application form will not be considered by the review panel (see section 17 of application (http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?
 OpenForm&ACT=RDR&TAB=PROFILE&SRCH=1&ENV=WWE&TIT=0026&NO=009-0026E)

All original signed letters must be received by the application deadline.

Common application errors and weaknesses

Common weaknesses of applications identified in previous ERA rounds include:

- failure to meet research excellence criterion
- proposed research lacks focus (numerous, unrelated or loosely related projects)
- proposal contains technical jargon and the content and language is not clear
- failure to "make the case", i.e. to explain the steps that led to the proposed research concept
- · failure to demonstrate independence from previous supervisors
- lack of detail in the HQP plan
- lack of detail regarding the strategic value to Ontario
- lack of funds to complete the proposed research and HQP training
- reference letters are not sufficiently arm's length
- sustainability is questionable beyond government funding
- failure to follow formatting instructions outlined in the guidelines

Review process

The <u>ERA</u> application and review process includes the following steps:

- 1. Institutions submit <u>Notices of Intent (NoI)</u> <u>(http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?</u> <u>OpenForm&ACT=RDR&TAB=PROFILE&SRCH=&ENV=WWE&TIT=0027&NO=009-0027E</u>) on behalf of their researchers
- Institutions submit <u>complete application packages</u> (<u>http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?</u> <u>OpenForm&ACT=RDR&TAB=PROFILE&SRCH=1&ENV=WWE&TIT=0026&NO=009-0026E</u>), including letters of reference, by the deadline

- 3. Ministry staff review applications for completeness
- 4. A Panel of Chairs determine applicants' eligibility
- 5. Eligible applications are forwarded to peer review panels for an expert review
- 6. Review panels make recommendations to the Ontario Research Fund (ORF) Advisory Board
- 7. ORF Advisory Board makes recommendations to the Minister
- 8. Minister makes final decisions
- 9. <u>ERA</u> decisions are communicated to the Vice-President of Research and the Institutional Contact of the applicant institution
- 10. Panel comments are provided to applicants

<u>ERA</u> panels are multidisciplinary and the application will be reviewed by panel members that are within and outside of the applicant's specific field of research. The content and language of the proposal should be clear and understood by people outside of the applicant's field.

The Ministry reserves the right to choose reviewers and to assign applications to an appropriate panel. There is no appeal of decisions, including decisions regarding the eligibility of the application.

The <u>ERA</u> program is a **discretionary**, **non-entitlement program** and funding is awarded on a **competitive basis**.

Evaluation criteria

Early researcher awards applications will be evaluated based on 4 weighted criteria; Excellence of the Researcher, Quality of the Research, Development of Research Talent, and Strategic Value to Ontario. The applications will be ranked as exceptional, excellent, very strong, strong, moderate, or insufficient on these four weighted criteria.

Below is a summary of the ERA evaluation criteria:

Excellence of the researcher (40%)

- academic and employment record
- research grants and awards received
- publication record
- other areas of research productivity
- researcher current and potential standing for excellence in the research field based on research plans and letters of reference
- independence from previous supervisor regarding publication record
- independent peer-reviewed funding

Quality of research (30%)

- excellence of proposed research
- originality of proposed research
- clarity of research proposal
- relevance of methodology

Development of research talent (20%)

- development of research knowledge of members of research team
- skills development of team
- training is unique and leading edge
- past experience in HQP training

Strategic value for Ontario (10%)

Demonstrates potential for strategic value for Ontario based on the <u>Ontario Innovation Agenda</u> (<u>http://www.mri.gov.on.ca/english/programs/oia/program.asp)</u> and other government priorities, including but not limited to:

- economic benefits
- knowledge transfer
- creation of experiential opportunities for students as identified in the <u>Highly Skilled Workforce Strategy</u> (<u>https://www.ontario.ca/page/building-workforce-tomorrow-shared-responsibility?</u> _ga=1.164846399.1211021313.1484682363)
- ability to enhance the province's profile in the global academic community
- social and/or cultural benefits
- anticipated impact on the Ontario Innovation Agenda's focus areas:
 - bio-economy, clean technologies
 - advanced health technologies
 - digital media and information and communication technologies

Youth research and innovation outreach

Applicants are required to undertake annual youth outreach activities that primarily target high-school, middle school and elementary school students. Up to 1% (equivalent to \$1000) of the funding provided by the government may be used for eligible expenses f or developing and delivering youth outreach activities, including consumable supplies (e.g. materials for crafts, lab supplies). Funding provided by the institution and/or partner organization may not be used for youth outreach. Activities associated with youth outreach are to be undertaken during each year of the project.

Researchers can:

- engage youth audiences, as well as educators and the general public, both on-campus and in the community
- expand current outreach activities, or start new initiatives that are free to youth and the public;
- partner with other researchers to undertake a broader outreach initiative
- participate in outreach activities operated by other organizations, such as science awareness organizations provided no fee is charged
- involve undergraduate and graduate students in outreach program design and deliver outreach activities, which can also include such initiatives as speaking opportunities, lecture series, workshops and demonstrations, student competitions and lab mentorship

Honoraria or salaries for high school student co-operative education or summer high school student positions are not an eligible Youth Outreach expense.

Grant agreement

The <u>ERA</u> will be administered by the research institution on behalf of the researcher. The institution will sign a contract with the Government of Ontario detailing the terms and conditions for the award. These include, but are not limited to the following:

- budget, including the matching contribution
- schedule of payments
- milestones, deliverables and performance measures
- reports required, including progress and financial reports
- youth outreach

communications

The <u>ERA</u> contract must comply with the guidelines established by the Government of Ontario for the management of public funds.

Terms under which amendments will be granted are available.

Classification codes for area of research and research discipline

Using the lists below, please add the <u>CFI</u> area code and <u>CFI</u> discipline code in the appropriate area of the application.

Research Discipline Codes

Multidisciplinary

5000 Multidisciplinary

Natural Sciences and Engineering

- 10001 Multidisciplinary in NSE
- 10100 Civil Engineering
- 10200 Structural Engineering
- 10300 Agricultural Engineering
- 10400 Forest Engineering
- 10500 Mining and Mineral Processing
- 10600 Environmental Engineering
- 10700 Industrial Engineering
- 10800 Design and Manufacturing
- 10900 Chemical Engineering
- 11000 Biomedical Engineering
- 11100 Materials Science and Technology
- 11200 Mechanical Engineering
- 11300 Fluid mechanics
- 11400 Fuel and Energy Technology
- 11500 Nuclear Engineering
- 11600 Electrical and Electronic Engineering
- 11700 Robotics
- 11800 Information Technology
- 11900 Artificial Intelligence
- 12000 Pure Mathematics
- 12100 Applied Mathematics
- 12200 Statistics and Probability
- 12300 Physics
- 12400 Theoretical Physics and Chemistry
- 12500 Astronomy and Astrophysics
- 12600 Space Science
- 12700 Condensed Matter Physics
- 12800 Physical Chemistry
- 12900 Analytical Chemistry
- 13000 Inorganic Chemistry
- 13100 Organic Chemistry

- 13200 Polymer Chemistry
- 13300 Earth Science
- 13400 Geographical Information
- 13500 Physical Geography
- 13600 Geochemistry and Geochronology
- 13700 Geophysics
- 13800 Atmospheric Science
- 13900 Hydrology
- 14000 Oceanography
- 14100 Evolution and Ecology
- 14200 Soil Science
- 14300 Plant and Tree Biology
- 14400 Genetics
- 14500 Cell Biology
- 14600 Microbiology
- 14700 Molecular Biology
- 14800 Biochemistry
- 14900 Animal Biology
- 15000 Food Science and Technology
- 15100 Psychology
- 15200 Life Sciences Related to Human Health and Disease
- 18000 Other

Social Sciences and Humanities

- 20001 Multidisciplinary in SSH
- 20100 Anthropology
- 20200 Archival Science
- 20300 Fine Arts
- 20400 Archeology
- 20500 Library and Information Science
- 20600 Communication and Media Studies
- 20700 Criminology
- 20800 Demography
- 20900 Law
- 21000 Education
- 21100 Classics, Classical and Dead Languages
- 21200 Mediaeval Studies
- 21300 Interdisciplinary Studies
- 21400 Religious Studies
- 21500 Folklore
- 21600 Geography
- 21700 History
- 21800 Modern Languages and Literature
- 21900 Linguistics
- 22000 Philosophy
- 22100 Psychology
- 22200 Industrial Relations
- 22300 Management, Business, Administrative Studies
- 22400 Economics
- 22500 Political Science
- 22600 Sociology
- 22700 Social Work
- 22800 Urban and Regional Studies, Environmental Studies

• 22900 Other

Arts and Letters

- 30001 Multidisciplinary in AL
- 30100 Architecture
- 30200 Visual Arts
- 30300 Arts and Crafts
- 30400 Theatre
- 30500 Music
- 30600 Dance
- 30700 Literature
- 30800 Media Arts
- 30900 Varieties
- 31000 Multidisciplinary and Multimedia Arts
- 31100 Other

Health Sciences

- 40001 Multidiscipinary in HS
- 40100 Infectious and Parasitic Diseases
- 40200 Neoplasms
- 40300 Endocrinology
- 40400 Thyroid
- 40500 Diabetes Mellitus
- 40600 Metabolism and Nutrition
- 40700 Blood
- 40800 Mental and Behavioural Disorders
- 40900 Drugs Pharmaceutical Science, Chemistry and Nonmedical Use of Drugs
- 41000 Central Nervous System Organic
- 41100 Diseases Affecting Speech/Vision/Hearing
- 41200 Cardiology
- 41300 Respiration
- 41400 Gastro Intestinal Disease
- 41500 Dental Diseases (Including Oral Biology)
- 41600 Genito-Urinary System
- 41700 Pregnancy/Childbirth
- 41800 Musculo-Skeletal
- 41900 Congenital Anomalies
- 42000 Perinatal
- 42100 Ill-defined Conditions
- 42200 Accidents, Poisoning, Violence
- 42300 Multidisciplinary Health Research
- 42400 Population Health General
- 42500 Health Services Research General
- 42600 Psychosocial Behavioural Research General
- 42700 Multiple Disease Relevance
- 42800 Other

Area of Application Codes

- 1. Exploration and Exploitation of the Earth
 - 1. Mineral, oil and natural gas prospecting

- 2. Exploration and exploitation of the sea-bed
- 3. Earth's crust and mantle excluding sea-bed and studies of soils for agriculture (6)
- 4. Hydrology excludes research on: water supplies and disposal (2.6) and water pollution (3.4 and 3.5)
- 5. Seas and oceans
- 6. Atmosphere
- 7. General and other research on the exploration and exploitation of the earth

2. Infrastructure and General Planning of Land-use

- 1. General planning of land-use
- 2. Construction and planning of building
- 3. Civil engineering excludes research on building materials and industrial processes (area 7)
- 4. Transport systems
- 5. Telecommunication systems
- 6. Water supply
- 7. Development of the North
- 8. General and other research on the infrastructure and general planning of land-use

3. Pollution and Protection of the Environment

- 1. Protection of atmosphere and climate
- 2. Protection of ambient air
- 3. Solid waste
- 4. Protection of ambient water
- 5. Protection of soil and groundwater
- 6. Noise and vibration
- 7. Protection of species and habitats
- 8. Protection against natural hazards
- 9. Radioactive pollution
- 10. General and other research on the environment

4. Health

- 1. Medical research, hospital treatment, surgery
- 2. Preventive medicine
- 3. Biomedical engineering and medicines
- 4. Occupational medicine
- 5. Nutrition and food hygiene
- 6. Drug abuse and addiction
- 7. Social medicine
- 8. Hospital structure and organization of medical care
- 9. General and other health research

5. Production, Distribution and Rational Utilization of Energy

- 1. Fossil fuels and their derivatives
- 2. Nuclear fission
- 3. Radioactive waste management including decommissioning
- 4. Nuclear fusion
- 5. Renewable energy sources
- 6. Rational utilization of energy
- 7. General and other research on production, distribution and rational utilization of energy

6. Renewable Resource Production and Technology

- 1. Agriculture
- 2. Fisheries and aquaculture
- 3. Forestry
- 4. General and other research on renewable resource production and technology

7. Industrial Production and Technology

- 1. Increasing economic efficiency and competitiveness
- 2. Manufacturing and processing techniques

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- 3. Extraction and processing of non-energy minerals and derived products, including building materials
- 4. Products of the chemical industry
 - 1. Petrochemical and coal by-products
 - 2. Pharmaceutical products
- 5. Manufacture of motor vehicles and other means of transport
 - 1. Aerospace equipment manufacturing and repairing
 - 2. Manufacture of motor vehicles and parts
 - 3. Manufacture of other modes of transportation
- 6. Electronic and related industries
 - 1. Manufacture of office machinery and data processing equipment
 - 2. Manufacture of radio, television and communications equipment and apparatus
 - 3. Software development
- 7. Manufacture of electrical machinery and apparatus
- 8. Manufacture of non-electronic and non-electrical machinery
- 9. Manufacture of instruments
 - 1. Manufacture of medical and surgical equipment and orthopaedic appliances
- 10. Manufacture of food products and beverages
- 11. Manufacture of clothing and textiles and leather goods
- 12. All other manufacturing products, including wood and paper products
- 13. Recycling
- 14. General and other research on industrial production and technology

8. Social Structures and Relationships

- 1. Education, training, recurrent education and retraining
- 2. Cultural activities
- 3. Management of businesses and institutions
- 4. Improvement of working conditions
- 5. Social security system
- 6. Political structure of society
- 7. Social change, social processes and social conflicts
- 8. General and other research relating to social structures and relationships

9. Exploration and Exploitation of Space

- 1. Exploration and understanding of space
- 2. Satellites
- 3. Launch systems
- 4. Space laboratories and space travel
- 5. General and other research on the exploration and exploitation of space

10. Other Research

• This code covers research which cannot be classified according to one of the other codes.

Ethical, safety and integrity requirements

Institutions must undertake the responsibility to ensure any experimentation will be acceptable on ethical and safety grounds. Institutions must:

- comply with the <u>Tri-Council Policy Statements: Ethical Conduct for Research Involving Humans</u> (<u>http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/Default)</u> for research involving human subjects
- comply with the <u>guidelines and policies of the Canadian Council on Animal Care</u> (<u>http://www.ccac.ca/en_/standards</u>) in the case of laboratory animal experimentation
- ensure that any research involving databases containing personal information adheres to ethical and legal requirements relating to privacy, confidentiality and security of the database information

- adhere to the standards outlined in the <u>Public Health Agency of Canada's Laboratory biosafety guidelines</u> (<u>http://www.phac-aspc.gc.ca/publicat/lbg-ldmbl-04</u>) for any research involving biohazards
- comply with <u>Canadian Nuclear Safety Commission regulations (http://nuclearsafety.gc.ca/eng/)</u> for research involving radioactive materials

The Government of Ontario expects program applicants and participating research institutions to maintain the highest standards of research integrity. Research institutions are to have policies and procedures in place that govern research integrity. Institutions must advise the government of the outcome of any investigation pertinent to the government that may be carried out by the institution.

Contact Us

To ensure continuity, consistency and open communication between the applicant and <u>ERA</u> program staff, all inquiries/discussions during the application, review, and post-award processes are to be coordinated by the lead institution's named contact and the assigned <u>ERA</u> program staff.

Please contact the following ERA staff for additional information or clarification:

For application and adjudication:

Tehani Mott

- <u>Email: tehani.mott@ontario.ca (mailto:tehani.mott@ontario.ca)</u>
- Phone: 416-325-9333

For post-award, contracting and reporting:

Catherine Fobler

- <u>Email: catherine.fobler@ontario.ca (mailto:catherine.fobler@ontario.ca)</u>
- Phone: 416-314-3799

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