UNIVERSITY OF TECHNOLOGY, JAMAICA

RESEARCH POLICY

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SCHOOL OF GRADUATE STUDIES, RESEARCH AND ENTREPRENEURSHIP

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SECTION I: RESEARCH ADMINISTRATION

1. Mission Statement

The research policy of the University of Technology, Jamaica supports, the University Mission statement on the promotion of learning and a commitment to an environment of:

- Excellence in teaching, scholarship and service
- Creativity and innovation
- Ethic of service and professionalism
- The effective application of knowledge
- New technologies through research and development

2. Guiding Principles

The research vision for the University is to "strengthen institutional capacity for research and consultancy". The objective is to utilize strategic collaborations to create new knowledge and applications for the benefit of students, staff, industry and the profession. UTech is committed to maintaining high ethical standards in its pursuit of excellence in research.

In 2004 the Research Committee, a Committee of the University's Academic Board, proposed a set of guidelines to ensure responsible research practice. In April 2007, The Research Committee was merged in to the Board of Graduate Studies, Research and Entrepreneurship (BGSRE), the governing Board for the School of Graduate Studies, Research and Entrepreneurship (SGSRE). The SGSRE guides and supports research activities, with a particular focus on inter-disciplinary and applied research relevant to economic and social problems/needs. In so doing it carries on the mandate of the Research Committee to periodically set guidelines for the review and approval of all research activities.

The purpose of the policy is:

- To provide guidelines for ensuring the integrity of research activity in the university.
- To provide opportunities for staff and students to engage in research according to acceptable national and international standards
- To provide a mechanism for the administration of research grants and research consultancies
- To protect the intellectual property resulting from university-sponsored research
- To ensure the safety and well-being of research staff, human and animal subjects and experiments.
- To facilitate the development of teaching, and critical enquiry and the furtherance of knowledge through research and the provision of research infrastructure.

3. Academic Freedom in Research

The university fully recognizes the freedom of staff and students to engage in research activity provided that the research for and behalf of the university or using the university's resources does not, in any way, create or have the potential to create a conflict of interest or compromise the integrity of staff, students, or the university. Notwithstanding this, the university reserves the right to identify priority areas and foci to which resources will be targeted. These priorities will change from time to time in accordance with national and global imperatives. The University does not encourage secret research of any kind and all research activities must be brought to the attention of the School of Graduate Studies, Research and Entrepreneurship through the Faculty Graduate Studies, Research and Entrepreneurship Coordinators.

4. Research Governance and Administration in the University

All research activity in the University is centrally coordinated through the School of Graduate Studies, Research and Entrepreneurship (SGSRE). The SGSRE is headed by a Vice President, who co-chairs the Board of Graduate Studies, Research and Entrepreneurship (BGSRE).

The BGSRE is the governing body for graduate studies, research, entrepreneurship and publications within the University. The Board performs the following functions in relation to **research**, **entrepreneurship** and **innovation**:

- Advise the University through the Academic Board on the development of University policy affecting research and innovation
- Advise the University through the Academic Board on the development of University policy affecting entrepreneurship.
- Develop, oversee and monitor processes for the effective implementation of resolutions, policy and procedures to support the University's strategic objectives in relation to research, and research training within the University.
- Develop, oversee and monitor processes for the effective implementation of resolutions, policy and procedures to support the University's strategic objectives in relation to research, and research training within the University and entrepreneurship through consultancy and innovation.
- Develop promotion and facilitation action plans for entrepreneurship and innovation within the University.
- Advise the University through the Academic Board on quality assurance and regulatory issues and on the sharing of good practice in respect of research.
- Identify opportunities for interdisciplinary research and inter-Faculty and inter-Institutional cooperation.
- Liaise with the School of Graduate Studies, Research and Entrepreneurship and Faculty Graduate Studies, Research and Entrepreneurship Coordinators as appropriate.
- Identify opportunities for the provision of consultancy services.
- Allocate such resources in support of research as the University may from time to time make available.
- Obtain information or reports from academic units on academic matters relating to research and research training and entrepreneurial activity.
- Monitor the implementation and effectiveness of University policies on research, innovation and entrepreneurship.

- **Faculty Graduate Studies, Research and Entrepreneurship Units (FGSREU)**

The FGSREUs are the Faculty-level counterparts of the SGSRE and the principal operational arms of the SGSRE. The units seek, and respond to, research needs, with a particular focus on inter-disciplinary and applied research relevant to economic and social problems/needs.

FGSREUs Research Goals

1. Every member of academic staff developing a personal research profile based on expertise and interest
2. Every member of academic staff developing a personal consultancy profile based on expertise and interest
3. Every Faculty actively seeking and responding to opportunities for commissioned research, and for consultancies including industry training.
4. Every Faculty actively seeking inter-disciplinary collaboration internally and with other faculties for graduate studies, research and consultancy
5. Every Faculty actively seeking the creation and the commercial use of innovations, with appropriate protection of intellectual property rights
6. Every Faculty actively seeking to publicize its knowledge-generating work through its own publications or through joint publications in the University

5. University Research Niche Areas

The SGSRE has identified a number of inter-disciplinary research and consultancy foci, reflecting the perceived strengths of the University applied to significant social and economic problems:

Energy
ICT Applications / Information Systems
Sports
Food
Hospitality
Health
Technical/Vocational Education
Waste Management / Alternative use of Natural Resources
Organizational Behaviour
Productivity
Land Management
Built Environment
Urban Space Management
Entrepreneurship
Forensics

SECTION II: RESEARCH APPROVAL PROCESSES

1. Research / Project Proposal Approval Process

Research Proposal Approval Process

The Faculty Graduate Studies, Research and Entrepreneurship Coordinators (FGSRECs) and the relevant Faculty Committees must approved all research initiatives undertaken at the proposal stage. The FGSRECs then submit such proposals for approval by the SGSRE. The School is to be updated on such projects through the submission of periodic reports.

All research proposals are subject to peer review as a quality assurance mechanism. Principles and procedures herein are to be followed to ensure that research initiatives are of acceptable standards and in accordance with the following:

a. The primary responsibility for the conduct of research rests with the academic staff conducting the research and in the case of team/group research, the principal investigator or team leader who shall ensure that members of the group understand university policy regarding research and research ethics and shall take reasonable measures to ensure compliance. In the case of student projects, the instructor, supervisor must take all reasonable measures to ensure that student research is conducted in compliance with the research policy.
b. Research methods and results should be open to scrutiny when required
c. All projects requiring the use of human or animal subjects must obtain prior ethical approval by filling the appropriate forms provided by the SGSRE. Any changes in protocol must be notified and revalidated by the Committee on Animal and Human Ethics.

Project Proposal Approval Process

The following guidelines are to be followed for project proposal approval

1. Indication of intention to bid, or to otherwise engage in entrepreneurial/research activity
2. Names of team members and the units from which they are drawn

3. Then completed proposal with detailed financials
4. Identification of all obligations of the corporate University
5. Identification of expected benefits to the University
6. A sufficiently detailed work plan which will indicate the expected inputs of team members against their substantive work responsibilities
7. Identification of Intellectual Property Rights obligations
8. Reporting procedure to the SGSRE serving as oversight manager on behalf of the University

SECTION III: RESEARCH FUNDING AND SUPPORT

1. Research Development Fund Policy (RDF)

The Research Development Fund began as a seed grant scheme in 2002. The major aim of the RDF is to provide support on a competitive basis for high quality research and pilot research projects of modest cost. A secondary objective is to support new researchers showing clear evidence of high research capacity. It also seeks to be, in part, a training programme for the preparation of and applying for other competitive grants.

The Research Development Fund (RDF) has the following categories:

New Researchers Fund

This fund is designed to support new academic staff members when appointed for the first time, or staff who is at the beginning of their research career, and who may be registered for their Graduate degree. It is a one-off, take-off grant to enable such staff set up when appointed.

As a complement to the grant, research mentors will be identified for such staff by the Faculty or the SGSRE in order to guide them into a research career.

Research Incentive/Feasibility Grant

This is to support individual researchers in developing proposals for funding. It will also serve as a seed grant for novel ideas, for developing partnerships and for identifying partners for collaborative grants which can be developed into a full project.

Individual Research Grant

This fund will be used to support individual researched on an annual basis. This will be based on a peer review of the proposal. Such proposals should have well-defined sets of objectives, hypothesis to be tested, a budget outline and a clear feasibility of the project within the time line of the project.

Group/Team Research Fund

This fund is designed to support identified groups for a period not exceeding 3 years subject to renewal for another 3-year cycle after a full review. Teams/Groups will funded along identified research priorities of the University. A multidisciplinary approach will be preferred.

Equipment Grant

This includes grants which vary from support for the purchase of small research equipment to grants for the purchase of multi-user equipments such as scanning, electron microscope, gene sequencer and High Liquid Chromatography. Such equipment grants may be funded on the basis of matching grants on a 50:50 basis by schools/Faculties.

General Conditions

a. Applications may be made for the support of research projects in a wide variety of fields.
b. Applications must be made ONLY on the forms provided. The application must follow the eligibility criteria and the appropriate guidelines.
c. Support will not be granted where a project forms an applicant's higher degree thesis or forms part of an applicant's degree thesis.
d. The RDF is intended to support specific scientific research projects and would not usually make funds available for teaching materials, costs of publication, conference attendance or fees.
e. Applicants should note that the SGSRE does not screen the final copies of applications to the RDF for errors and omissions. The SGSRE may peruse and make comments on drafts of applications before the final submission.
f. Incomplete application forms will be returned for completion.
g. Re-submitted application forms that remain incomplete will not be considered.
h. Generally funds **will not normally** be disbursed to underwrite research to be conducted overseas.
i. All equipment and other relevant material bought remains the property of the **University of Technology, Jamaica.**

Eligibility

a. The RDF is open to academic members of all Faculties who have a tenured/tenable appointment; have a full-time or partial academic appointment of 50% or more for the academic year.
b. Researchers may hold more than one grant simultaneously if there is no duplication of the projects.
c. For projects where researchers collaborate with colleagues from other institutions there will be a case-by-case consideration in light of the possible merit to the University of the collaboration.

Selection Criteria

The application proposals will be assessed as follows:

- The overall quality of the research project – how it can lead to advancement in the conceptual framework of the topic
- The possibility of important discoveries or innovations or solutions to problems of economic and social significance (40 points)
- Coherence and clarity of the research proposal (30 points)
- The quality and feasibility of the proposed research in light of the cost (the adequacy and justification of the budget) and outcomes (where researchers would perhaps be more competitive for larger grants, publication). (20 points)
- Proven track record of the researcher/s in terms of publications or other outcomes (5 points)
- Consistency with the University of Technology's policy on Research and Development (5 points)

2. Formation of Research Entities

Rationale

In May 2003, the then Research Committee of the Academic Board approved the formation of research entities – groups, units, and, later, fully fledged research institutes. At present the SGSRE is focused on supporting interdisciplinary research groups and entities that will produced applied research and consultancies from research findings.

The University's research and consultancy foci - *ICT Applications / Information Systems; Sports; Food; Hospitality; Health; Technical/Vocational Education; Waste Management / Alternative use of Natural Resources; Organizational Behaviour; Productivity; Land Management; Built Environment; Urban Space Management; Entrepreneurship and Forensics* – are identified as focal areas for the pursuit of **SMART** projects.

SMART
S – Specific
M – Measurable
A – Achievable
R – Relevant / Realistic
T – Timely

The idea behind a research entity is to provide a block grant for research in order to sustain the activity of such units over a 3 - 5 year cycle. These entities (apart from the Research Institute), lie outside of Category 2 bodies under the University Ordinances (April, 2002).

Research Groups

- This category of support runs over 3-year cycle.
- The research group is in recognition of individual standing, outside recognition and support especially in specific sub-themes of the university research agenda or research productivity. Staff members who are not from the same school should be involved in a committed way
- The financial support shall be in the range of J$1million per year for 3 years (subject to period reviews by the SGSRE with the approval of the BGSRE).
- The group leader shall demonstrate considerable outside support and research productivity.
- The academic members of the group are entitled to local and overseas conference travel from group funds.
- Members of the group are to engage in research consultancy.

Research Unit

- This category of support carries a 5-year cycle of support.
- This is a prestigious recognition based on the standing of an individual or a specific research niche.
- The recognition of a research unit is intended to convey status and prestige.
- The research unit will normally be headed by a Research Professor.

Research Centres

Research activities undertaken by the University Research Centres and other bodies are subject to the requirement of ordinance 1999/5 for the establishment review of other bodies. All research activities generated by these bodies by University or external funds must follow the guidelines of research activities in this document.

Mode of Application for the Setting up of a Research Entity

The establishment of a University research entity, group, unit or centre may be in response to a general invitation by the President or the BGSRE. However an individual/Faculty/ school or a group may apply to the SGSRE, for the BGSRE approval, for the establishment of such a group and the formal recognition for its activities.

Disestablishment of a Research Group or Unit

Following the resignation or retirement of the Leader of a group or unit, the BGSRE may withdraw recognition for such a group or unit. The BGSRE may however, grant recognition to a new or similar unit.

The BGSRE may also withdraw recognition to a group or unit, if after a cyclical review, the productivity of the group or unit is not deserving of further support by the university

3. President Research Initiative Award

Background

The University of Technology, Jamaica (UTech) is committed to developing its research activities and graduate studies to a world class standard. Towards this end, UTech's vision is to develop its research capability through manpower development and investments in infrastructure. One of the essential steps for achieving UTech's vision of research excellence is by giving appropriate encouragement and incentives to academic staff in the pursuit of research initiatives in all areas inclusive of the main University research themes – *ICT Applications / Information Systems; Sports; Food; Hospitality; Health; Technical/Vocational Education; Waste Management / Alternative use of Natural Resources; Organizational Behaviour; Productivity; Land Management; Built Environment; Urban Space Management; Entrepreneurship and Forensics*.

The President's award to be called ***'The President's Research Initiative Award'*** is the University's most prestigious award in recognition of individual initiative aimed at promoting research excellence in the University.

The Purpose

The purpose of the award is to stimulate research and scholarly activities by encouraging and supporting individuals who demonstrate exceptional ability through their scholarly activities, research publications, research income generation and secure grants making, creative research activity and other research outputs. The award will be made annually.

Eligibility

- All full-time academic staff at the University of Technology, Jamaica are eligible to be considered for the award annually. It is to the candidate's advantage (<u>but not essential</u>) to possess a doctoral or research postgraduate degree.
- The award will be based on the nominee's research track record over the past three years preceding the award.

The Award

The award will be made to any individual who shows evidence of self-initiated research of a novel nature, any creative endeavour in support of research or any other research output worthy of exceptional recognition.

The Criteria for the Award

Nominees must demonstrate exceptional research initiative as indicated by either individual research creativity, team leadership in research, postgraduate research and supervision and (exceptionally), undergraduate supervision, research mentorship or any other individual/faculty initiatives which may include:

- Publication of at least 2 peer-reviewed research and papers and/or contributions in books or chapters in books
- Consultancy and technical reports
- Faculty Initiatives in Research such as:
    - Securing national approved grant schemes or industry research grants
    - National/International Research Recognition
    - Major exhibitions of work/designs
    - Conference Organisation/Journal Editorship
- Intellectual property output– copyrights and patents

Granting of the Award

The SGSRE may use its discretion not to make recommendation if in its judgment, no nominee meets the criteria.

SECTION IV: RESEARCH ETHICS AND STANDARDS

1. Research Ethics

The University of Technology, Jamaica, is committed to high standards of research integrity. Researchers in the University should therefore demonstrate integrity, honesty and professionalism in the conduct of their research. Breaches to academic integrity will result in the penalties sanctioned by the University Ordinances. Ethical conduct is required in the following areas:

a. Research involving human subjects

- Research involving human subjects must ensure that:
    - proper consideration is given to rights of individuals, the risk involved
    - that informed consent are obtained from subjects prior to conducting the protocol
    - anticipated benefits and the importance of knowledge accruing are explained to the subjects (see Appendix I).

  This policy applies to all research involving human subjects whether the research is sponsored by the University, conducted under the direction of a university employee or involves the use of a university facility.
- The SGSRE, through the Research Ethics Committee will ensure that all protocols and/or data collection (questionnaire, interview, observation and document review) are reviewed and approved according to national and international standards.
- In addition, the University will require that appropriate additional safeguards be put in place in research that involves pregnant women, prisoners, children, the disabled, the aged or other vulnerable groups. The SGSRE is responsible for ensuring that:
    - the University and all its affiliates comply fully with guidelines requiring notification, counseling and safety in studies involving the Human Immunodeficiency virus (HIV) and other infectious diseases
    - records of consent forms are kept for a period of 5 years after the completion of the research activity.

- clear communication is maintained among the research administrators and the research community regarding the safeguarding of the rights and welfare of human subjects.
- University staff members are kept abreast of Health and Safety regulations regarding Human subjects.

Ethical Guidelines

General

a. There should be clear justification for the involvement of human subjects in the research. The justification should include a clear scientific purpose for the research and the expectation that it will increase knowledge and its application for the health and benefit of mankind.
b. All potential risks or disadvantages to the participants must be explicitly stated on the application form. A list of drugs, vaccines, procedures, instruments or other devices to be used in the study must accompany the application form.
c. The Research Ethics Committee (REC) must be satisfied that the proper research protocols are clearly stated before granting approval.
d. All subjects must be clearly informed in writing about issues such as confidentiality, privacy and their freedom to withdraw from the study if they so desire. If participants from special groups are included in the study (e.g. children, pregnant women, the elderly and captive groups) there should be adequate justification for this.
e. All special incentives/treatment that human subjects will receive through their participation must be clearly indicated.

Research Personnel

a. All personnel involved in data collection (conducting an experiment, administering questionnaires, conducting interviews or observations and reviewing documents) involving human subjects must be trained.
b. Principal investigators and research supervisors must ensure that all research personnel observe the REC guidelines, are supervised and that they receive explicit

instruction on aspects of human ethics. The responsibilities and activities of all individuals dealing with humans should be consistent with their respective competencies, training and experience.

Oversight of Research

a. The principal investigator/research supervisors should inform the REC if any untoward occurrence is observed or procedures deviate from the originally approved protocol.
b. The principal investigator should refer to the REC if there are any concerns about the ethical or scientific merit of the proposed study.
c. The principal investigator should notify the REC at the end of the project indicating exit procedures.

b. Research involving animal subjects

Any research or teaching involving animal experimentation must fulfill appropriate national legislation and protocols guiding the use of animals in research, ensuring humane care and avoiding unnecessary pain and distress to experimental animals.

Such protocols must be approved by the Research Ethics Committee or its subcommittee on Animal Experimentation Ethics. Researchers must complete the appropriate form (Appendix II) provided by the SGSRE detailing the type of procedure, animal species involved, number of animals, protocol, duration of experiment and the end point of the experiment.

The University has set up an Animal Experimentation Ethics Committee whose responsibility is to establish policy and procedures for the approval of the use of animals for scientific experimentation and teaching projects in compliance with national regulations on humane treatment and welfare of animals and to ensure that all applications have been peer-reviewed for scientific merit.

Ethical Guidelines

Justification for the use of animals

a. There should be clear justification for the use of animals for teaching and research. The justification should include a clear scientific purpose for the research and the expectation that it will significantly increase knowledge and its application for the health and benefit of mankind.
b. The species of animals used for the study must be best suited for the study and all researchers must consider using alternative species when there is a need to do so and in order to minimize the use of large numbers of animals.
c. Animals for experimentation must not be used until the AEEC is satisfied that the protocol is appropriate and humane.

Personnel

a. All personnel involved in research using live animals must be trained in animal handling techniques. Specialist procedures (surgical procedures, anaesthesia) must be supervised by veterinary personnel or other qualified and experienced individuals.
b. Principal investigators and supervisors must ensure that all individuals who use animals observe the AEEC guidelines are supervised and that they receive explicit instruction on experimental methods, care and maintenance of the species being studied. Responsibilities and activities of all individuals dealing with animals should be consistent with their respective competencies, training and experience in the handling of animals.

Housing and Care of Animals

a. Facilities housing animals should meet or exceed acceptable standards in order to prevent overcrowding, pain and suffering, temperature fluctuations and other unhealthy situations (see Appendix of the United States National Institute of Health Guide for the Care and use of Laboratory Animals http://oacu.od.nih.gov/regs/guide.htm).

b. Responsibilities for the conditions under which animals are kept rest with the Principal investigator. In addition to the physical well-being of animals, a psychologically-enriching situation must be provided for animal subjects including adequate provision of food and water.

Surgical Procedures

a. It is important to act under the belief that situations that create pain in humans would also create pain in animals and protocols such as surgery without anesthesia are unacceptable.
b. All surgical procedures on animals require post-operative care and sound post-operative care and monitoring must be introduced to minimize discomfort and to prevent untoward consequences of the procedure.
c. Animals should not be subjected to successive surgical procedures unless this is approved by the AEEC.
d. When the use of animals is no longer required by an experimental protocol, alternative uses of animals must be considered. When euthanasia is the only alternative available, it should be immediate and as painless as possible.
e. All surgical materials including syringes, needles and carcasses should be well disposed of.

2. Field Research

All field research involving staff and students must emanate from approved research protocols and must be conducted with due regard to the University's research ethics and policy. All staff and students must wear the identification badges during such field trips. Field assistants and other casual staff employed for research purposes shall operate under the same guidelines regarding staff participation in research. In addition, the following factors must be well-considered before undertaking field work:

- the state of health of all participants including requirements for immunization
- the availability of first-aid care and emergency procedures
- the local laws, culture and conventions
- the environmental impact of the field work

- Provision of training for field workers regarding risks
- Insurance cover for property (in case of damage to university-owned equipment), liability (accidental and unintended damage to person or property) and automobile.

3. Policy regarding bio-safety and bio-hazards

All research in the University must comply with national and international Health and Safety regulations and according to the Factories Act of Jamaica (1928) or any of its amendments.

- All research staff are enjoined to familiarize themselves with building, fire and health regulations and the policies of the Occupational Health and Safety Committee of the University.
- All laboratories should have first aid kits, fire extinguishers and other protective devices.
- Work involving genetically-modified organisms must be notified to the SGSRE
- Disposal of experimental animals, chemical and biological waste must be in accordance with the national safety regulations detailed above.
- Use of radionuclides can only be permitted by people with prior training in the handling of radionuclides, in designated laboratories and where adequate monitoring procedures are in place to ensure that pregnant women and minors are not unduly exposed to dangerous radionuclides.
- All dangerous chemical spills and/or breaches of the safety regulations must be reported to the University Disaster Coordinator, the nearest Hospital and the Office of Research and Graduate Studies.

SECTION V: STUDENT RESEARCH AND SUPERVISION

1. Undergraduate and Graduate Student Research – General Guidelines

The following refers to undergraduate and graduate students who are involved in research as part of their degree programmes:

- The University shall inform students of all appropriate regulations, policies and, facilities regarding research. It is the responsibility of students to follow the regulations and policy regarding research. It is the responsibility of the research supervisor to ensure that students understand and apply the university policy regarding ethics, safety of life and property and the correct usage and handling of equipment while conducting research, including the training of all personnel in the use and handling of equipment, reagents and other materials and the provision of protective clothing, first aid kits and precautionary labeling and handling of hazardous materials (radioactive materials, carcinogens and corrosive reagents etc)
- A clear distinction should be made between paid work (for which no credit is earned) and research training which contributes to the student's project.
- When a graduate student is paid to work on a research project, paid for by an external body, it must be made clear to him/her what his/her duties and responsibilities with regard to the project are.
- When a discovery is made during the course of a student project, a full discussion must be made within the research group in consultation with the Faculty research adviser regarding ownership of intellectual property, publication rights and if a consensus is not reached, the matter shall be referred to the SGSRE for final arbitration.
- In circumstances where research undertaken for a thesis or dissertation or other form of publication may have commercial sensitivity or where the student or staff feel that their interest would be at risk if the thesis, dissertation or publication were publicly available, the student/staff may apply for a deferment of public availability. In those circumstances, the thesis, dissertation or research activity is treated as confidential and restricted to the investigators, the supervisor(s), examiner(s) and student(s) involved in the project. The deferment period shall not exceed one year except in cases where patents are pending and in those cases, will not exceed 3 years.

2. Undergraduate Final Year Project

Background

The University currently has a set of policy guidelines on Undergraduate Degree Major Project which governs the administration of final year diploma and post diploma degree students. It has become necessary to review the policy in the light of a unified 4-year Undergraduate curriculum and the discontinuation of the Diploma programme.

Purpose of the final year project

The Final Year project constitutes a major part of the training of undergraduate students as it enables students to learn how to organize and execute a project, search and review the literature, design experiments, present data and generally practise problem-solving skills and merge theory with practice. It is a capstone project involving the application of all modules as much as possible in a practical way. Additional goals of the final year project are to promote the scholarship of enquiry and build a cadre of budding researchers who are able to benefit from the research activities in the university and provide avenues for enrolment in the budding graduate courses of study of the university.

The present policy is designed to harmonize standards across the university, strike a balance between exposing students to an adequate, independent and rigorous methodology of exploration while ensuring that such projects are completed within a specified time limit and at minimum cost to the students and the university.

Title of project

The project shall be known as Final Year Undergraduate Project in order to distinguish it from other projects which students may embark upon during the course of their study

Scope of the project

The Undergraduate Project shall be consistent with the aim of the degree courses of study and shall draw its title from at least 2 modules of the degree courses of study. The

'project' shall be limited to 3 credits or 135 practical hours.[1] In order to cover such a time limit, the project should be limited in scope to include such areas as investigate by literature search, reviews, case studies and content analysis and other exploration which embraces analysis of current knowledge in the discipline. In cases of experimental designs or discovery of new knowledge, supervisors must ensure that students are exposed to projects which fire their imagination without bogging them down. In cases where interesting projects cannot be completed on schedule, students may be encouraged to continue such studies at the postgraduate level.

Assigned credits and duration of the project

The minimum number of assigned credits to the project shall be limited to 3 credits or 135 (practical hours) or a completion time of 15 weeks credits may also be assigned according to discipline requirements. As a guide, the assigned hours shall be allocated as follows:

Semester	Schedule	No of Hours	Maximum Time*
1	Identification of Project/supervisors	5-10 hours	2 weeks
1	Literature review/Proposal Writing/Ethical Clearance application	25 hours	5 weeks
2	Experimentation/Design/Data gathering	60-75 hours	6-8 weeks
2	Analysis and Write -up	20-25 hours	2-4 weeks

*This is calculated on a 5 hour week or a maximum 0.25 FTE on the project where 1 FTE is 40 hours/week

[1] There can be some flexibility here, dependent upon the requirements of the programme's accrediting body.

Group projects

The university encourages students to design and execute a group project. The number of students in a group should not exceed **5** and shall not be fewer than three **3**

Administration of Final Year Projects

Oversight

The oversight function for the administration of the final year students and the maintenance of standards in each faculty shall generally lie within the purview of the Faculty respective course of study. However, each School will be responsible for the following functions:

Semester 1

- Making available a list of projects available in the school.
- Guidance and selection of project topics by students.
- Making available the list of Supervisors and their qualifications
- Allocation of students into supervisory groups such that limits as to group size and student/supervisor ratios.
- Ensuring compliance with University and faculty policy regarding ethical clearance, safety, grievance, copyright and intellectual property (IP) and other regulations.
- Assisting students with arrangements for field work, designs and other outreach activities.
- Assisting students with access to bursaries, grants and other funds for the execution of projects.

Semester 2

- Supervision of Project execution
- Ensuring compliance with University standards regarding publication, copyright and IP
- Assessment of Final year Projects and Reporting

Supervision

- There shall be supervisors appointed by the programme director for each group of students.
- It is desirable that each supervisor shall have a Minimum of Master's degree.
- Supervisors must not supervise more than **2** student group projects in any one year
- In cases of cross faculty supervision, the number of students supervised must be taken into consideration in arriving at the final number of students per supervisor
- Newly appointed project supervisors must attend the regular training seminars for supervisors which are organized by the Office of Research and Graduate Studies and continuing supervisors should attend at least once in 2 years and an appropriate certification given for such training.

Responsibilities of student supervisors

Project supervisors are to:

- Ensure that they have expertise and be current in the area of supervision before taking on students
- Ensure that students are familiar with university rules regarding ethics, safety and intellectual property and the general code of ethic regarding student- supervisor relationships
- Ensure students are guided to sources of information, example Calvin Mckain Library, on the project including relevant, literature, equipment and other vital supplies necessary for completion of the project
- Ensure that available resources are made available to students
- Ensure proper supervision including exposure to exploration while making themselves available to the student at reasonable and agreed times during the course of the execution of the project.
- Guide the students appropriately to ensure that appropriate methodologies are used during analysis and the write-up phase of the project.
- Ensure that students are not distracted from their primary assignments by other duties including projects

- Ensure that there is no conflict of interest with regards to choice of students, nature of projects and intellectual property.
- Ensure that agreement with outside bodies is kept as approved by relevant bodies.
- Ensure student employ group work methodologies

Payment for Project Supervisors

Project supervisors will be paid in accordance with the current University's policy.

Ownership of project and intellectual property issues

Any intellectual property (patent, copyright and designs) arising from all student projects should be owned by the students, their supervisors and the university in accordance with the University Intellectual Property Policy.

Any publication arising from student project must acknowledge student input and assign authorship according to the level of input. It is normal to acknowledge supervisors as joint author or in the acknowledgement section where necessary.

Project stages

The Final Year Project is normally a group project designed to encourage creativity and application. The project seeks to develop the ability to:

- Plan, Schedule, monitor and Design work.
- Construct an hypothesis and defend it (where relevant)
- Use relevant sources of information and Literature
- Apply relevant tools and Methodologies
- Analyze scientifically and logically deduce Relevant findings
- Present and communicate findings either as final report, written report or poster
- Some disciplines may require a practical component
- Develop abilities to work in group context

The following stages of the project should be explained to Students, so that there is a workflow and a structured organization of the project:

Phase I. Planning-Setting project objectives, literature review, ethical clearance were necessary, Environmental scan, Methodologies to be used, Resources

Phase II. Project Execution and Implementation

Phase III. Analysis and Evaluation of Results

Phase IV. The Project Report (Write-up) Phase

Phase V. Presentation of project/results/findings/analysis

Assessment and Final Project

Assessment and Evaluation

Project assessment should take into consideration the following:

1. Whether the objectives of the Project were met.
2. The **Process** by which the outcomes of the project were reached
3. The **Overall Presentation** of the project
4. A component for individual marks

Mark Schemes and Oral Presentation

Faculties will grade projects according to discipline requirements.

(In order to ensure consistency in grading, a project assessment panel consisting of Head of School, Supervisor of the project shall grade a sample each projects).

Presentation format for Projects

- A standard format shall be used for Student project and such format shall be placed on the ORGS page of the website indicating spacing, fonts, margins, tables and figures and language styles.
- All students and supervisors should be made aware of the standard format for the presentation of student projects.

- A page containing a Declaration of Authorship, the date of submission, title and supervisor's signature and other statement on copyright shall be included in the project.
- Copies of projects are to be retained in electronic copy in the Faculty and where the projects are granted "A" for content and use of good written standard, it is mandatory that bound copies (bounded by the Faculty) are to be deposited in the library through the approval of the Head of School and the Faculty's Undergraduate Project Coordinators.

3. Graduate Research

Not withstanding the policies enunciated in the *Graduate Handbook*, the following shall apply to postgraduate research in general.

Research supervision

- Each Faculty GSRE Committee shall establish Supervisory Panel for each graduate (research) student consisting of the main supervisor with proven competence in the research field of study, a second supervisor drawn primarily from industry, and a third (non-technical) supervisor.
- Members of graduate research degrees supervisory panels must be approved by the Faculty Graduate Studies Research and Entrepreneurship committee for their specific role on the panel on submission of curriculum vitae. Students may recommend particular persons to be considered as members of their supervisory panel, and, similarly, qualified members of the University may request assignment to a particular supervisory panel. The Board of Graduate Studies Research and Entrepreneurship, guided by the Faculty GSRE committees, holds final responsibility for approving the appointment of the best supervisory panel for the student's research project.
- The full panel must together meet with the student being supervised at least three times during the period that the student is pursuing the graduate research degree: Once at the start of the programme, once when the thesis is being finalized for presentation for examination, and once in the course of the programme at a time to be determined by the lead/chief supervisor.

- A Supervisor's Report must be completed at each meeting. A copy of the report must be placed on the student's files and a copy submitted to the SGSRE.
- Problems arising out of supervision should be addressed first at school/faculty levels and then taken to the SGSRE which reserves the right to determine if the issue can be dealt with by the School or recommend that it goes before the BGSRE.

Roles/ Responsibilities of the panel of supervisors

The panel is expected to:

a. Provide satisfactory mentorship, guidance and advice
b. Monitor the progress of the student's research programme
c. Establish and maintain regular contact with the student, and ensuring accessibility by the student, by whatever means is most suitable given the student's location and mode of study
d. Have an input in the students' developmental needs
e. Provide timely, constructive and effective feedback on the student's work, including his/her overall progress within the programme
f. Ensure that the student is aware of the need to exercise probity and conduct his/her research according to ethical principles.
g. Provide effective pastoral support and/or referring the student to other sources of such support, including institutional support services (student services).
h. Facilitate the student's interaction with others conducting research in the field. This would include supporting the student in seeking funding to attend and participate in conferences.
i. Provide guidance for the student in researching and producing articles for journal publications.
j. Provide guidance for the preparation of the student's thesis to satisfy the conventions of the discipline.

Appeals against decisions on theses and dissertations

Students may appeal against an examination decision on a thesis whether at first examination or re-examination and request for a review of the examiner's recommendations.

Requests for a review are permitted only on the following grounds:

- That there were circumstances affecting the student's performance of which the examiners were not aware and which could not have been reasonably made available to the examiner at the time of first examination.
- That there is evidence of procedural irregularity in the conduct of examination, including administrative errors of such a nature as to cast doubt on the validity of the examination.
- That is the evidence of improper assessment on the part of one or more of the examiners

Students wishing to request such a review are to give a notice requesting a review within 3 months from the date of notification of the result. Such appeals are sent through the Faculty with copies sent to the SGSRE.

A Graduate Review Panel shall be constituted by the SGSRE and shall comprise persons with experience in the examination of research degrees and a Chair drawn from the membership of the BGSRE (outside of Faculty).

The decision of the Graduate Review Panel shall be made to the BGSRE for ratification.

APPENDIX I: APPLICATION FOR THE ETHICS APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS

1. SHORT TITLE OF PROJECT (limit 150 characters-see Guidelines)

2. APPROVAL FROM ANOTHER ETHICS COMMITTEE

Has this project been submitted (or will it be submitted) to another Ethics Committee for approval? Yes ☐ No ☐

If YES, name the committee(s), and give the status of each application. (Attach copies of correspondence with each Sub-Committee)

Name of Ethics Committee and Institution	Application Reference No.	Approved/Pending/Rejected/ To be re-submitted (select one)

3. PRINCIPAL SUPERVISOR

Name: Title/first name/family name	
Qualifications & position held:	
Organizational unit & mailing address:	
Telephone and Fax:	
Email address:	

4. STUDENT RESEARCHERS (Postgraduate only)

Name: Title/first name/family name	
Qualifications:	
Organizational unit & mailing address:	
Telephone and Fax:	
Email address:	

Name: Title/first name/family name	
Qualifications:	
Organizational unit & mailing address:	
Telephone and Fax:	
Email address:	

Copy table and repeat for each additional students.

5. STUDENT RESEARCH (Undergraduate)
Is this a final year project of a student of the University of Technology, Jamaica?
Yes ☐ No ☐

If YES, complete the following:

	Student ID No: _____
Name of student:	
Course of study:	
Research Supervisor:	

6. ESTIMATED DURATION OF PROJECT (dd/mm/yy)

This is the period during which you anticipate contact with participants, their personal records, or the handling of human tissue samples.

From: _____/_____/_____ To: _____/_____/_____

7. FUNDING
Is the project the subject of an application for funding to an internal or external grants body drug company, etc? Yes ☐ No ☐

If YES, answer the following questions:
(a) List the funding sources and give the status of each application. *(Attach copies of the primary application for funding)*

Funding Body	Approved/Pending/Rejected/To be submitted

(b) What is the exact project title on the funding application(s)?

8. PRIVACY LEGISLATION

Does the project involve access to personal information held by a Government department or agency, or private sector organization? Yes ☐ No ☐

If YES, will the access to personal information be **without** the consent of the individual(s) to who the information relates? Yes ☐ No ☐

If YES, to both of the above, specify the type of data to be accessed/collected, the departments/agencies holding the information, and the number of records involved.

Type of Data:
Department/Agency:

9. AIMS AND SIGNIFICANCE OF PROJECT

Provide aim(s) of the study and the potential merit(s)/significance of the study.

Aim(s):
Significance of the Study:

10. SPECIFIC TYPES OF RESEARCH

Does the proposed research involve any of the following?

		Yes	No
A.	People with an intellectual or mental impairment, temporary or permanent?	☐	☐
B.	People highly dependent on medical care, e.g. emergency care, intensive care, neonatal intensive care, terminally ill, or unconscious?	☐	☐
C.	Particular communities or groups such as convicts and captive groups?	☐	☐
D.	Use of human tissue samples, features, embryos and stem cells or cell lines?	☐	☐
E.	Other specific cultural, ethnic or indigenous groups?	☐	☐
F.	Assisted reproductive technology?	☐	☐
G.	Epidemiology research?	☐	☐
H.	Human genetic research?	☐	☐

I.	Any concealment or covert observations?	☐	☐
J.	Clinical trials	☐	☐
K.	Minors under the age of 18	☐	☐

NOTE: If YES, provide details (total number involved), of how consent will be obtained. Informed consent of parents or guardians and where practical, of children should be obtained in research involving children.

Number Involved:
Informed Consent:

11. RESEARCH PLAN AND PROCEDURES
Provide a clear description of the proposed research plan and procedures, by answering the following questions:

A. Where will the project be conducted? (Schools, hospitals, organizations, etc.)

B. What is the research design? (Case study, survey, experimental, ethnography, action research, correlational study, etc.)

C. Briefly describe the research method(s). (Questionnaire, interview, observation, document review, etc.)

D. Which participant group(s) will be used in the study and why have they been selected?

E. How will potential participants be approached to participate in the study? *(Attach copies of letters, advertisement, posters or other recruitment material to be used).*

F. How much time will potential participants have to consider the invitation to participate?

G. How will potential participants be selected? *(Describe sampling method(s) to be used).*

H. How many participants will be recruited and what is the rationale for that number?

I. What is required of participants? *(Attach copies of any survey, interview schedule, data sheets, etc., to be used).*

J. How will the privacy of the participants be protected?

12. RELEVANT EXPERIENCE OF RESEARCHERS

A. Have you conducted a similar type of protocol/survey before? Yes ☐ No ☐

B. When? (Please state): _____

C. Where? (Please state): _____

13. DATA MANAGEMENT

Briefly explain the ways in which you propose to ensure proper management or safety of data and findings.

14. ANALYSIS

Explain how information you receive will be analyzed, interpreted and reported. What specific approaches or techniques (statistical or qualitative) will be employed?

15. PROPOSED REVIEW OF PROGRESS, PARTICIPANT CARE, AND WINDING UP PROCEDURES

Describe the mechanisms that will be put in place with the following:

Review of progress of project

Duty of care to participants and research staff

Procedures for reporting adverse events

Premature cessation (termination) of project

Feedback of results to participants

I hereby declare that:
I have read and understand the University's Policy regarding human ethics. All personnel involved have adequate experience and training to perform the protocols. I will adhere to all protocols described in this document and report any modifications for the approval of the Research Ethics Committee.

Applicant's Name	Signature	Date
_____	_____	_____

I have read the applicant's proposal and I support the request for research ethics clearance.

Supervisor's Name	Signature	Date
_____	_____	_____

Official Use Only

Decision: Approved ❑ Not Approved ❑

_____ _____

Chairman, Research Ethics Committee Date

Revised: January 11, 2009

APPENDIX II: APPLICATION FOR PERMISSION TO USE ANIMALS FOR TEACHING/RESEARCH

Section I: Project Details

1.1 Title of Project:

_____

_____

1.2 Aims and Objectives of the Study:

_____

_____

_____

_____

_____

_____

_____

1.3 Justification for use of animals (Is there an alternative procedure?) YES / NO

_____

_____

_____

_____

_____

1.4 Is this for teaching or research?:

_____

_____

_____

_____

1.5 Names of Research Team

Principal Investigator:_____

Faculty _____

School/Department _____

Email _____

1.6 Sources of Funding:

_____

_____

_____

1.7 Animal (Species) to be used:

Animal Species	**Strain, Age, Sex**	**Total number Required**	**Source**
Mouse			
Rat			
Rabbit			
Guinea-pig			
Dog			
Horse			
Sheep			
Cattle			
Pig			

Chicken/Bird			
Amphibian			
Fish			
Primates			
Other species			
(Animal tissue/ Cell lines)			

1.8 Approval obtained/required from other agencies YES / NO

If YES, state _____

Section II: Animal Housing and Care

2.1 Location: _____

2.2 Person responsible for day-to-day care:_____

2.3 How many animals per cage? _____

2.4 Is the temperature and humidity of the housing facility appropriate for the test animals: YES / NO

2.5 Is food / water provision adequate? _____

Section III: Experimental/Teaching Details

3.1 Type of experiment to be done _____

3.2 Duration of Experiment/Teaching: _____

3.3 Briefly outline the procedures to be applied to the test animals

_____

_____

3.4 Do you have experience in these procedures? YES / NO

3.5 Any infectious agents to be used? YES / NO

If YES, name agent _____

3.6 Anaesthesia (dosage) / other chemical agents

_____

_____

3.7 Post-operative or post procedural care:

_____

_____

3.8 Is there any risk to man / animals? YES / NO

3.9 State risks:

_____

_____

Section IV: Fate of animals following experiment / teaching

4.1 Do you intend to sacrifice the test animals? YES / NO

Section V: ***To be completed by the Principal Investigator***

I hereby declare that:

I have read and I understand the University's Policy regarding animal experimentation ethics. All personnel involved have adequate experience and training to perform the procedures in Section III (if required). I will keep to all protocols described in this document and report any modifications for the approval of the Animal Experimentation Ethics Committee.

_____ _____

Applicant's Name and Signature Date

Approval/Not Approved:

_____

_____ _____

Chairman, Animal Experimentation Ethics Sub-Committee Date

I will keep to all protocols described in this document and report any modifications for the approval of the Animal Experimentation Ethics Committee.

_____ _____

Applicant's Name and Signature Date

Approval/Not Approved:

_____

_____ _____

Chairman, Animal Experimentation Ethics Sub-Committee Date

APPENDIX III: RESEARCH DEVELOPMENT FUND APPLICATION FORM

RESEARCH DEVELOPMENT FUND APPLICATION FORM

(*All applications must be typed and bear a signature of the Head of School and the Dean. 5 copies of the application must be sent to the Research Office by the deadline. For additional information on grants and deadlines, please contact ext 3204 / 3139 or email orgs@utech.edu.jm)*

APPLICATION CATEGORY

Please check one:

New Researchers ( )

Research Incentive ( )

Individual ( )

Group/Team ( )

Equipment ( )

Applicant (s)
_____

Rank/Title(s)
_____

Date of Appointment
_____

School/Faculty
_____

Date of Last Application
_____

Amount Granted
_____

TO ALL APPLICANTS (attach not more than 5 pages)

1. **PROJECT DESCRIPTION**

   i) Project Title

   ii) List of Participating/Collaborating staff

iii) Postgraduate Students involved

   iv) Summary of project

   v) Research plan

   vi) Expected Outcomes

   vii) Ethical Clearances (Human / Animal Ethics): Applicable ( )

   Not Applicable ( )

   If applicable, have you obtained one? Yes ( ) No ( )

2. **BUDGET OUTLINE**

3. **BUDGET JUSTIFICATION**

4. **EXPECTED FUNDS FROM OTHER SOURCES**

5. **SIGNATURES**

Applicant:

Name _____ Signature_____

Date_____

Head of School:

Name _____ School_____

Signature_____ Date_____

Dean:

Name _____ Faculty _____

Signature _____ Date_____

APPENDIX IV: RESEARCH DEVELOPMENT FUND PROGRESS REPORT

RESEARCH DEVELOPMENT FUND
PROGRESS REPORT

YEAR _____

1.	**Project Title:** **Applicant's Name:** **Job Title:** **Period Covered by Report:** **Reference Number:** (**For Official Use Only**)

2.	**Goals and Objectives (as per project proposal)**

3.	**Summary of work done to date (including outcomes)** **not more than 100 words**

4.	**Any other comments: (Problems / Hindrances etc)**.

5. **Financial Report: (attach receipts etc)**

List items in **Approved Application**	Amount Spent

6. **Faculty Research Committee Comments**:

_____ _____

FGSRE Coordinator Date

_____ _____

Signature of Awardee Date

FOR OFFICIAL USE ONLY

SGSRE:

DATE: