Research Handbook

2023 – 2024

University of Technology Bahrain

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Research Overview

RESEARCH OVERVIEW

Research is one of the core functions of University of Technology Bahrain (UTB). This function can be traced as an important thread throughout the University's strategic framework and would serve as backbone of pedagogical practices and student learning. The Research Council supports and encourages scholarly activities of all types and in all aspects of research undertakings.

To strengthen further the research mandate of the institution, the University's five-year strategic plan includes a high-level Strategic Goal, *" Pursue high-impact research and innovation through business and industry collaborations, and international linkages"*. The Research Council includes views regarding the quality and quantity of the research. It focuses on conducting applied research, developing new ideas and seeking innovations in the research outcomes responsive to socio-economic requirements of Bahrain and the region.

Research Goal and Objectives

Research Goal and Objectives

Research Goal

Pursue high-impact research and innovation through business and industry collaborations, and international linkages.

Research Strategic Objectives

1. Deliver impactful innovation through collaborative engagement in research projects with industry, business, government, and the community.
2. Cultivate a high-level research workforce and culture.
3. Foster research excellence and innovation which will lead to the increase of the overall quality and quantity of published scientific outputs.

Research Thrusts

Research Thrusts

A. College of Administrative and Financial Sciences (CAFS)

- Islamic Banking, Financial Markets, Insurance, Banking and Accounting
- Global Human Resource and Welfare
- Micro, macro, and managerial economics
- Information Communication and Technology
- Cyber security
- Cloud computing Internet of things
- Software engineering
- Informatics

B. College of Computer Studies (CCS)

- Algorithm and Data Analysis
- Artificial Intelligence
- Network System and IOT
- Software Engineering, Programming Language, and formal Methods.

C. College of Engineering (COE)

Engineering Research

- Robotics Technology and Control Systems
- Automation, PLCs, Instrumentation
- Expert and Distributed System
- Mobile computing and network resource management

Natural Science and Math research

- Environmental Pollution and Global Warming
- Industrial Research
- Renewable Energy and Applications
- Computational Science, Numerical Analysis and Mathematical Modeling
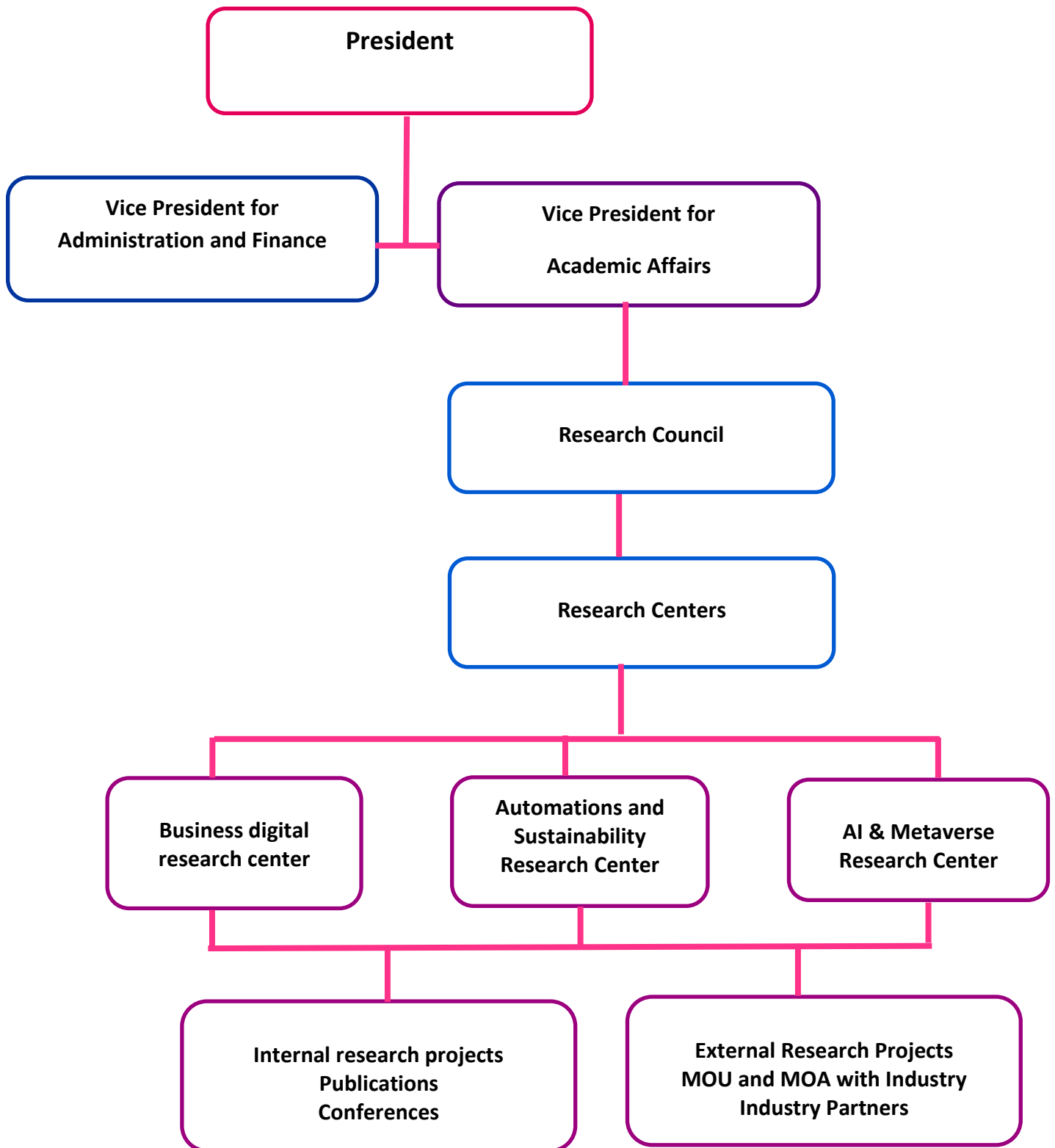- Mathematics Education
- Nanomaterials and Nanotechnology

D. *Center for General Education (CGE)*

- Academic performance, Innovative teaching, blended learning, classroom management
- Language Proficiency, English for Specific Purposes and Academic Purposes
- Sociological/Ethical values
- Human Rights and contract law

Research Framework

Research Framework

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                          │   Research Centers   │
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| Business digital research center | Automations and Sustainability Research Center | AI & Metaverse Research Center |

| Internal research projects Publications Conferences | External Research Projects MOU and MOA with Industry Industry Partners |

There are three research centers distributed across the colleges, operating under the research council's jurisdiction:

1- The Digital Business Research Centre (DBRC) for the College of Administrative and Financial Sciences

2- The Research Centre of Metaverse and Artificial Intelligence for the College of Computer Studies (MARC)

3- Automation and Sustainability Research Centre for the College of Engineering (ASRC).

The faculty members of the Center for General Education (CGE) will be affiliated within the Digital Business Research Centre.

The UTB Research Council (UTB-RC) is composed of Director of Research Council as a chairperson, the Research Centers Heads, Chief Financial Officer (CFO), and a representative from the student council. The goal of the UTB-RC is to support, encourage, and enhance research projects; and promote research culture among UTB faculty members, staff, and students. The UTB-RC responsibilities is stated in term of reference (TOR) of the research council. Generally, The UTB-RC in coordination with research centers are responsible for all research matters of the university, such as implementing and monitoring research projects, facilitating research publication, and attendance to conferences, workshops, and seminars.

Faculty members of all colleges including the Center for General Education may work collaboratively with each other in different research areas.

Research Policies

Polices on Faculty Research

A. Research Funding

The University of Technology Bahrain allocates 3% of its revenues for Scientific Research and implements a transparent and clear mechanism of funding and spending from scientific research budgets on specified objectives of research plan and in accordance with the Article (10) of Scientific Research Regulations of the Higher Education Council, which are:

1. Purchasing research equipment and tools including computers and specialized software needed for the research project.
2. Purchasing biological, chemical and physics materials including glassware and tools and others needed for the research project.
3. Purchasing specialized books and scientific periodicals to support certain project however, such books and periodicals shall be given to the institution library after the end of the project.
4. Purchasing databases required for execution of the research project or payment of subscription fee, therefore.
5. Purchasing specialized scientific tests and metrics or leasing equipment required to execute all or part of the research project.
6. Execute contracts with suppliers to repair and maintain equipment and machines purchased for research projects.
7. Scientific publication expenses resulting from publication of research made by a teaching faculty member in the reputable scientific periodicals or conferences volumes and folders as given in the publication guidelines.
8. Expenses of organizing scientific conferences and scientific symposiums and related academic activities.
9. Travel expenses of a teaching faculty member if he is required to visit a body outside the kingdom to perform certain research project such as compiling data or using specialized equipment which is only available with that body.
10. Scientific consultation and external services expense if required for the research project.
11. Expenses of the practical consultancy and external services, if required by the research project.
12. Any other expenditures required to complete the research project and of a similar nature to the items mentioned above.

B. Research Projects

1. The principal investigator submits the research project proposal to the Program Head according to an application form issued by the Research Council Director. In case of multiple departments/colleges of the research team, the form must be submitted to the Program Head to which the principal investigator belongs.

2. The Program Head submits the research proposal to the Dean of the College, providing his opinion in the space provided in the application.

3. The Dean of the College refers the research proposal to the Research Centre of the College for reviewing and evaluation.

4. The Head of Research Centre submits the recommendation to the Dean of the College, stating the opinion of the Centre in the space provided in the application.

5. Upon the approval of the Dean of the College, the research Centre head submit the proposal, including all attachments to the Research Council Director.

6. The Research Council Studies the proposal and submits the proposal with attachments to the Academic Council.

7. The Academic Council deems the research proposal for making the appropriate decision and determine the amount of support. The council may seek the specialists' opinion other than its members to assess the scientific value of the research project.

8. The Vic President for Academic Affairs submits the recommendations of the Council to the University Council to make the appropriate decision regarding the research project and the amount of financial support.

9. After approval by the University Council, the amount of support will be paid in stages and based on the approved plan and budget of the proposal and the progress reports submitted by principal investigator.

10. The Research Council Director approves all procedures of disbursement according to original invoices or purchase orders submitted by the principal investigator by filling the relevant forms after being approved by the principal investigator to be deducted from the research project budget according to the disbursement guidelines at the University.

11. The principal investigator submits progress reports at the end of each phase to follow up achievement of the project.

12. No change or amendment to the project plan may be made after approval unless a written approval obtained from the Research Council.

13. The principal investigator is committed to finish the project during the period specified in the application form, with the possibility of extension for the duration of the project according to a report submitted by the principal investigator explaining the reasons for the extension.

14. In case of terminating the project for any reason, the Council recommends to the University Council to take any of the following actions:

- Stop the project and return the remaining amounts to the research budget at the University.
- Assign one of the researchers involved in the project or an external researcher to complete the project.
- Recover a percentage of the amounts spent on the project from its beginning as determined by the Research Council.

a. Upon completion of the project, the principal investigator submits two final reports (technical and financial) to the Research Council.

b. The Research Council deems the final reports and submit its recommendations to the Academic Council for appropriate decision.

c. If the contract of any of the research project team ended before the completion of the project, it is permissible to continue participating in the project upon recommendation from the Research Council and approval of the University President.

C. Terms and Conditions of Project Funding

1. The applicant must be a faculty member at the University and at least has a rank of Assistant Professor.

2. The principal investigator submits the research project proposal during the period stated in the call for project proposals.

3. The principal investigator submits the research project proposal according to an application form issued by Research Council for this purpose.

4. The principal investigator agrees not to submit the same research proposal to another supporting body and not to obtain prior support for the same research proposal.

5. The researcher may submit or participate in more than one research project proposal.

6. The submitted research project proposal should be consistent with the University and the national research priorities.

7. An outcome of a published or accepted for publication article in a Web of Science or Scopus indexed journal or conference from the research project.

8. In the published article, the researcher(s) should mention the University of Technology Bahrain in the affiliation and state that the project was funded by the University of Technology Bahrain, as well as any other funding institutions, if applicable

D. External Collaborative Research

1. Research Center(s) can collaborate with Industry, Academic Institutions, and Government agency as appropriate.

2. Faculty members of UTB can collaborate with researchers outside the university to submit research project proposals to the college's research center for consideration and approval.

3. The research Centre of the concerned colleges will evaluate the feasibility of conducting the research and the required budget from UTB and the external bodies. Notification will be sent to the concerned faculty member(s) of UTB and external bodies in case of rejection.

4. The collaboration proposal shall be submitted to the research council for evaluation and endorsements.

5. Upon the endorsement of the Research Council, the proposal shall be submitted to the Academic council for evaluation and approval.

6. A contract draft is preliminarily signed between the head of the research center and the project team upon receiving approval(s) from the academic council.

7. The proposal, the contract draft, and all attachments shall be submitted to the University Council for final approval.

8. The project shall be implemented according to the contract.

E. Publication in Journal

Eligibility criteria for availing publication fee

1. The source of the published article must be indexed with Scopus.

2. A published article is eligible for claiming full processing fees only if the author(s) are from University of Technology Bahrain.

3. A published article is eligible for claiming half of the processing fees if the first author is from UTB and co-author(s) are outside the UTB.

Procedure for Applying Publication Fee:

1. The faculty member submits the Publication Fee Claim Form with the supporting documents to the Research Center Head of the respective college. The supporting documents include:
   - A copy of published article in a journal or Acceptance Letter

- Source details of the journal (Scopus with covering period)
- A receipt showing the amount paid as publication fees for the article.
- Ethical Assessment Form

2. The Research Centre Head verifies and submits the claim form with supporting documents to the Programme Head who forwards it to the college dean for endorsement.

3. The endorsed claim form is forwarded to the Research Council Director for review and approval.

4. Approved claim form is forwarded to the Vice President for Academic Affairs.

5. The Vice President for Academic Affairs forwards it to the Vice President for Administration and Finance to ensure and approve the availability of funding, then submit to the president to for final approval.

6. Upon the president's approval, the financial department takes the appropriate action for the payment of the publication fees.

Participating in a Conference Guidelines.

1. The University shall, fully or partially, fund the expenses of the faculty member participation in Scopus indexed in conferences. This funding includes any of the following items:
   - Conference fees
   - Travelling expenses
   - Accommodation fees
   - Daily Allowances

2. If the faculty member participates in a conference within the Kingdom of Bahrain, the University shall contribute only to the registration fees.

3. The faculty member shall submit a research article to the conference that is relevant to the faculty member specialization and college research thrust.

4. The faculty member should submit the acceptance letter and the affiliation of the accepted article must include University Technology Bahrain

Procedure for Applying Conference Participation Fund:

1. The faculty member submits the Application Form for Participating in a Conference along with the supporting documents to Research Centre Head to which he/she belongs. The supporting documents are,

- Acceptance Letter of the conference
- Conference details
- A copy of the accepted article
- A receipt showing the amount paid as subscription fees if paid already.
- Ethical Assessment Form

2. The Research Centre Head verifies and submits the claim form and all attachments the Program Head to which the applicant belongs.

3. The Program Head forwards the claim form and all documents to the Dean of the college.

4. The Dean writes his remarks in the space provided in the claim form and forwards to the Research Council Director with all supporting documents.

5. The Research Council Director writes his remarks in the space provided in the claim form and forwards to the Vice President for Academic Affairs.

6. The Vice President for Academic Affairs forwards it to the Vice President for Administration and Finance to ensure and approve the availability of funding, then submit to the president to for final approval.

7. Upon the president's approval, the financial department takes the appropriate action for the payment of the publication fees.

E. Policy on Research Incentives

The University supports the continuous professional education in the field of research to further strengthen the research mandate of the institution. Hence, it is the policy of the University to uphold the development of the research outputs of the faculty members and staff including students by motivation through research incentives. The purpose of the incentives is to boost publication rates in peer reviewed international, indexed, and high impact factor journals. Also, the research should be applicable and reached the level of commercialization. This policy is applicable to all faculty members, staff, and students at the University.

Research Incentives

The research incentive is an annual payment to the faculty who achieved the required publication or patent or applicable research output. The rules are applied as follows:

Publications

1. A published paper in a peer reviewed international journal or conference (Scopus, ISI, academia, ERIC, h-index), which has an impact factor of 3 or more whether print, online or both, will be awarded BD 100.
2. A published paper in a peer reviewed regional journal or conference will be awarded BD 75.
3. A published paper in a peer reviewed local journal and conference will be awarded BD 50.
4. UTB will cover the publication costs for books, chapters, and research papers.
5. UTB issues certificate of recognition for the research which has been completed, and published locally, regionally, or internationally.
6. The research incentive can only be availed once a year.

Other Supports

1. UTB allows faculty to present their research in local, regional, and international conferences, symposium, workshops, etc.
2. UTB shoulders the registration fee, hotel accommodation, visa fee, and airfare of the faculty member, staff, or student.
3. UTB also provides daily allowance (per diem) and transportation allowance to faculty member, staff, or student.

D. Policy on Intellectual Property

It is the policy of the University to protect the intellectual property rights of faculty members, students and staff on research outputs and scholarly activities.

This policy and procedures provide guidelines on protecting the research outputs and scholarly activities of the faculty members, students, and staff. This document covers the policy and procedures on researchers' consent, copyright, patent, production, distribution and marketing of research outputs, royalty, and administrative mechanism, which are coherently, aligned with the national laws and regulations of Intellectual Property and copy rights in the Kingdom of Bahrain such as:

- Law No. 22 of 2006 on the Protection of Copyright and Neighboring Rights.
- Law No. 1 of 2004 on Patents and Utility Models, as amended by Law 14 of 2006.
- Law No. 7 of 2003 on Trade secrets, as amended by Law N o. 12 of 2006.
- Law No. 44 of 2005 on approving the accession of the Kingdom of Bahrain to the Patent Cooperation Treaty and its Regulations (2006).
- Law No. 19 of 2005 on Approving the Accession of the Kingdom of Bahrain to the Patent Law Treaty and Regulations (2005).

Researcher's Consent

1. All completed research conducted in the UTB in lieu of nine (9) hours (faculty members) should be submitted to the Research Centre. All research which has to be published, should be accompanied by a research consent form issued by the Research Center.

2. For publication of completed research outside of the nine (9) hours, either solely conducted or in collaboration/partnership with external partner, a permission to use the affiliation with UTB must be sought.

Copyright

University-Funded Research

1. If the research work is done during the official duty of the researcher, copyright will be in joint ownership of the UTB and the researcher.

2. If the research work is not done during the official time of the researcher but with the financial assistance from the University, the University is entitled to a percentage of the royalty from the research work. Formal agreement will be formulated for such conditions.

Commissioned Research

1. For UTB-commissioned research, the copyright shall be in joint ownership of the UTB and the researcher.

2. For research that are commissioned by external entities, ownership will depend on the agreement made by the UTB, the researcher, and the external entity.

Collaborative Research

Ownership of collaborative research, that is, researches conducted through joint efforts of the UTB, external entity and the researchers shall belong in joint ownership of the parties involved. A MOA pertaining to the collaboration shall stipulate the extent/degree of ownerships of the concerned parties.

Production, Distribution and Marketing

The manner of production, distribution and marketing of research works will be assessed by the Research Council and the Academic Council (AC). The RC and AC's recommendations will be submitted to the VPAA who in turn endorses it for approval to the President. The Research Centre(s) and research Council are the offices responsible for the processing of the approval.

Royalty

The royalty derived from the research work shall be awarded according to the manner of ownership previously mentioned. The details of which will however be stipulated in the agreement that will be formulated and signed by the concerned parties.

Patent

Patenting of research work will generally follow the form of ownerships earlier mentioned. Details of the patent will be based on the form of ownership.

Administrative Mechanism

The Research Centre(s), Research Council together with the Academic Council shall be responsible in the formulation of standards, guidelines, rules, and regulations relating to copyrightable and patentable research to be endorsed by the VPAA and approval of the President.

E. Policy on Research Ethics and Conduct

Research Ethics

Ethics is of great importance to research and provides guidelines for the responsible conduct of well-defined research. In addition, research ethics educates and monitors scientists conducting research to ensure a high ethical standard. To help researchers address the issue of ethics, UTB has produced a policy and set of procedures that apply to all research activity being undertaken by faculty members, staff, and students at the university.

Ethical and Safe Conduct of Research

In the context of research ethics, the research center assesses the ethical acceptability of a research project through consideration of the foreseeable risks and the ethical implications of the project including but not limited to safety, privacy, confidentiality, and intellectual property rights. The research must not begin until approval using the Ethical Assessment Form has been received from the appropriate Research Centre.

Responsibilities of the Researcher

- Respect the dignity of participants, including their rights, beliefs, perceptions, customs, and cultural heritage.

- Consider how the research might be designed to maximise any benefits to participants and the researcher and to minimise the risk of legal, environmental, social, emotional, psychological, and physical harm or discomfort to participants; inform participants of any risk including associated risks.

- Inform participants of the nature and purpose of the research.

- Seek voluntary informed consent from participants and, if the participants are unable to give informed consent, from participants' parent(s) or legal guardian(s).

- Respect the right of individuals not to participate in research or to withdraw from research at any time without explanation and without negative consequences.

- Protect any personal information that they may acquire.

- Respect any agreement made about anonymity.

- Respect the confidentiality of the individual or groups of people in the conduct and reporting of their research.

- Use data or test results only for the purpose for which consent has been obtained and obtain consent for any subsequent publication.

- Submit genuine findings or results of their research.

Plagiarism

UTB uses a proper detection anti-plagiarism system (Turnitin) to scan work for evidence of plagiarism. This system has access to many sources worldwide (journals, books, articles, magazines, websites etc.). The software helps scan documents of any type for plagiarism using cutting-edge technology to identify and highlight similarities with other documents in the database; giving our faculty, staff, and students an opportunity to check their documents for plagiarism before submission. This policy is applicable to all researchers, faculty members, staff, and students at the University.

Faculty

1. Each faculty is responsible for the uploading of his/her own research output to the anti-plagiarism software (Turnitin).

2. Faculty must attach the result of check of plagiarism during the submission of his/her research to college research center. The threshold for similarity index should not exceed 20%.

3. Any violation for research ethics and conduct subjects a researcher to the university penalties.

Student

1. Before a student or group of students is allowed to schedule for final oral presentation, he/she/they must submit the final draft of his/her/their document to the advisor.

2. The advisor uploads the documents into the plagiarism software.

3. For thesis, capstone, design project, practicum/industrial attachment similarity index should not exceed 20%.

4. Only a student or group of students who meets the prescribed threshold is allowed to schedule his/her/their oral presentation.

5. The anti-plagiarism (Turnitin) report as mentioned in 1-4 should be part of the cited reports as appendix.

6. Any violation for research ethics and conduct will subject a researcher to the university penalties.

Research Misconduct

A. Research Misconduct

UTB demands that all faculty members and students engaged in scholarship to research activities adhere to the highest ethical standards. Misconduct in scholarship/ research by any member of UTB community threatens the image of UTB and the person. Hence, all scholarly activities must be free from any form of scholarly misconduct.

B. Forms of Scholarly Misconduct

Fabrication, falsification, plagiarism, violation of intellectual property rights, submission of falsified/tampered research papers, misuse research funds and no submission of research output in accordance with the specified research guidelines.

Penalties for Misconduct

 Faculty and staff

Faculty members and staff who after due process, are found to have committed scholarly misconduct may be levied one or more of the following sanctions depending on the gravity of the offense:

OFFENSE	OCCURRENCE & PENALTY			
	1st	2nd	3rd	4th
Fabrication, falsification, plagiarism	4			
Violation of intellectual property rights	4			
Submission of falsified/tampered research papers	4			
Misuse of research funds	4			
No submission of research output in accordance with the specified research guidelines.	4			
Late submission of research output in accordance with the specified research guidelines.	1	2	3	4

Legend:
   1- Verbal reprimand   2- Written warning
   3- Three-day suspension   4- Termination for a cause

Undergraduate/Postgraduate Students

Undergraduate/graduate students who after due process, are found to have committed scholarly misconduct may be levied one or more of the following sanctions depending on the gravity of the offense:

OFFENSE	OCCURRENCE & PENALTY		
	1st	2nd	3rd
Fabrication, falsification, plagiarism	1	2	3
Violation of intellectual property rights	1	2	3
Submission of falsified/tampered research papers	1	2	3

Legend:
   1- Failing mark in the course   2- Suspension
   3- Dismissal/non-readmission with invalidation of grade in the course

F. Policy on Research Commercialization, Consultancy, Incubation and Entrepreneurship

Research Commercialization

Recommendations for research commercialization are made at the UTB. Approval of the research commercialization is by the President of UTB with initial recommendations by the college Research Center Head(s), dean(s), Research Council Director, and endorsed by the VP for Academic Affairs and VP for Administration and Finance.

Faculty members allocate nine (9) hours a week of their workload to conduct research. The researcher can collaborate with local/regional/international researchers after having the university approval. The research shall be treated as shared property between the author(s) and the university. Thus, may be commercialized as a product of shared research project. Together they can seek a business partner to the product of the research to be in the market.

Consultation requires analyzing an organization performance and figures out strategies for improving its day-to-day operations and overall functioning. Consultancy provides tangible benefits to UTB constituents in several fronts including research and teaching. Faculty members can be engaged as a resource person in key national issues involving technology, environment, and business among others. Succeeding in this diagnostic usually requires an individual, who is adept at problem solving, is creative and has excellent interpersonal skills. There are several responsibilities of consultation include observing organization operations, identifying problem areas, developing practical solutions, executing changes and assisting employees throughout the process. The process of consultation involves the practitioner meeting the members of the colleges, department heads, college deans, and heads of administrative units in the university and work teams observing the interaction, problem identification skills, solving procedures. The consultant feeds back the team with the information collected through observations, coaches and counsels' individuals and group in the university.

Incubation and Entrepreneurship

The Incubation and entrepreneurship are a comprehensive assistance programme designed to help students with start-up resources to improve their chance to build their companies and for existing companies to collaborate with academics in improving the design, operations, systems, process of the company. Also, the incubation helps faculty members, staff, and students to develop their research ideas to the level of commercialization.

Procedures

Research Commercialization

1. Research outputs are solicited, evaluated, and endorsed by the College Research Center and Deans to the Research Council Director.
2. Director of Research Council endorses to the VP for Academic Affairs and VP for Administration and Finance
3. If the research output is approved internally for application, commercialization, and incubation, it will be endorsed to the President for approval.
4. Intellectual Property Right (IPR) should be signed between the researcher, university, and investors.

Consultancy

1. UTB through its colleges may partner with local companies sharing the same goals/objectives of bringing growth and progress to the Kingdom by providing consultancy services to these companies giving them the opportunity to benefit out of the university's expertise, knowledge, facilities, and technologies in various fields for the mutual gains of partners. Also, if a faculty member receives an invitation for consultancy, he/she can give the service to the organization after having the approval of the university.
2. Once an initial contact/meeting is made, the college Dean endorses the consultancy service project to the VP for Academic Affairs; upon approval, the Dean prepares comprehensive plans (strategic and business) to charter the direction of the consultancy service project needed, both short term and long term.
3. The Dean presents the consultancy service project to Academic Council of UTB where the project is assessed and decided upon.
4. If the project is accepted, the Academic Council endorses the project to the President for approval. In case the project was rejected, the dean and the partner may revise the project details and resubmit it for further consideration by University Council.
5. Once the project is approved by the President, a Memorandum of Agreement (MOA) is executed by both parties, outlining the roles and responsibilities of each party as well as the entitlements and benefits.

Incubation and Entrepreneurship

1. UTB through its colleges may partner with leading companies which share the same goals/objectives of bringing growth and progress to the Kingdom through incubation and entrepreneurship projects.

2. Once an initial contact/meeting is made, the Dean endorses the partnership to the VP for Academic Affairs.

3. Upon the approval of the partnership by the VP for Academic Affairs, the dean prepares comprehensive plans (strategic and business) to charter the direction of the incubation program, both short term and long term.

4. The Dean presents the incubation program to the University Council of UTB.

5. The University Council assesses the incubation program and decides whether the program should be approved or rejected.

6. If the program is accepted, the University Council endorses the incubation program to the President for approval.

7. In case the program is rejected, the dean and the partner may revise the incubation program details and may resubmit it for further consideration by the University Council.

8. Once the partnership is approved by the President, a Memorandum of Agreement (MOA) may be executed by both parties, outlining the roles and responsibilities of each party as well as the entitlements and benefits.

G. Policy on Capstone/Thesis

The Capstone/Thesis Course is a mandatory course for all postgraduate and undergraduate students of UTB which is useful for their practical life after graduation.

Undergraduate Students' Capstone Course

A. Pre Oral Defense Stage

1. Students must register in the Capstone Project course through the registration system.

2. Capstone advisor prepares the list of expert advisers according to their expertise. Furthermore, students are assigned an expert adviser from the pool of faculty members and submit the list to the Dean for the approval.

3. Once it is approved then it is disseminated to the students and expert advisers.

4. The students must get an acceptance form signed by the experts and submit a copy to the Capstone Advisers.

5. An expert adviser will guide and supervise the students from start until the end of the project.

B. Oral Defense Stage

1. The Capstone/thesis adviser must ensure that the Thesis/Design Project is complete before including it in the schedule of defense. Complete means that:

   • Edited and printed final draft of manuscript.

   • Software is available and running.

   • The prototype is available and working/functioning.

   • Plagiarism threshold (20%).

2. After fulfilling the pre oral defense stage the students are allowed to take the oral defense before of the Capstone/thesis Course committee. The final result of the student's evaluation which was done by the committee was then submitted to the College Dean.

3. The final evaluation report is endorsed by the committee and the feedback is given to the advisers.

4. The result of the evaluation can be satisfied or unsatisfied will be communicated to advisers.

5. Advisers are to inform students about their final submissions and guide them to prepare and bind the project thesis accordingly.

C. Post Oral Defense Stage

1. Student must make four copies which should bear all the signatures including the chair of the committee, internal member of the committee, an external member of the committee and the Dean of the College.

2. One copy is submitted to the library for clearance, one copy submitted to the College, one copy to an expert adviser and one copy for him/herself for the record purpose.

3. The final result will be submitted by the expert advisor to the system.

Graduate Student's Thesis Writing Course

a. Topic Proposal Defense

1. The student shall submit at least three (3) topic proposals including a Gantt chart.

2. The Thesis Writing professor will form a panel of two (2) who are aligned to the topics.

3. Before the panel, the student will defend each topic proposed.

4. The panel approves, using an appropriate rubric, one topic out of three for the student to work on.

5. The professor appoints an expert adviser to guide the student on the whole duration of the thesis preparation.

6. The approved topic of each student will be submitted to the HEC for final approval.

b. Pre - Oral Defense

1. The student, after finishing the first three chapters and upon the recommendation by the expert adviser, shall apply for Pre-oral Defense.

2. The professor will convene the same panel to sit on the pre-oral defense; and,

3. The panel approves the first three chapters including the methods and requisite research instruments.

c. Final Defense

1. Upon the recommendation by the expert adviser, the student, after completing all chapters and meeting the required plagiarism threshold (20%), shall apply for Final Defense; and,

2. The professor reconvenes the panel of two (2) and added one (1) external evaluator to include some externalities to the process.

3. The Programme Head submits an HEC Info Sheet Final defense with the Higher Education Council at least 30 days before the date of the defense.

4. The defense shall be conducted in a big hall, open to the public, and at least for two (2) hours.

Research Regulations

Research Regulations (excerpts from HEC's Scientific Regulations for HEIs

Roles of researcher(s) of a project

Excerpts from Chapter one, Article 1 of the Scientific Research Regulations for Higher Education Institutions. The role of the principal researcher of the project, the associate researcher and the referee/examiner are as follows:

Main researcher: is a member of academic or scientific body or like that who join one researcher or more during the research procedures to achieve and study certain subject and who supervises and manages the research team.

Associate researcher: is a member of academic or scientific body or similar to that in the area of specialty and who participate with a main researcher or more to achieve and study certain subject. The responsibility shall be collective with the main researcher in addition to the responsibility of the task given in the area of research specialty and expertise.

Referee/investigator(s): is a member of academic or scientific body or similar to that in the area of specialty and who is tasked to examine and study a research proposal or scientific production with the objective of scientific evaluation or making a judgment in relation to specialty and methodology in addition to deciding the size of benefits resulting there from.

Research Council's Functions and responsibilities

Scientific research is a part of the UTB's functions and aims which is in accordance to Research Regulations of the Higher Education Council, Chapter 1, Article 2:

1. To enrich science and knowledge of which the institution is tasked.
2. To build scientific capabilities through formation and training of postgraduate students in various scientific research.
3. To contribute to transforming the Bahraini society into knowledge economy based on creativity and innovation.
4. To create new applications of economic returns that contributes to the diversification of income in the Kingdom.

5. To participate in achieving sustainable national and development plans and priorities for the Kingdom and to implement the national strategic of scientific research.

6. To transfer and localize new technology and to improve it in line with international updates according to the conditions and environment of the Kingdom in order to achieve the objective of the comprehensive national development endeavors.

7. To improve the standard of higher education and reflect the role and contribution of its institutions in building the modern human civilization without abandoning Arabic and Islamic heritage.

Conditions and Procedures of Scientific

UTB mapped all policies for scientific research considering the Research Regulations for Higher Education Institutions, Chapter 2, Article 3:

1. To be in line with research areas of priority as indicated in the national strategy of scientific research in the Kingdom as approved by the Higher Council of Education.

2. To comply with scientific research ethics and norms by implementation of the international charter of scientific research ethical codes and to create a mechanism to deal with scientific fraud.

3. To comply with the laws organizing intellectual properties in the Kingdom.

4. To ensure competition principle in funding research by scientific examination of research projects proposed and approve them before their execution and evaluate them after being achieved.

5. To identify the role of the main researcher, the associate researcher, and the referee/examiner.

6. To translate the scientific research policy into an annual executive plan.

Responsibilities of Research Council

UTB has a Research Council under the Vice President of Academic Affairs of the University, responsible of organizing scientific research with the following tasks in accordance with Research Regulations of the Higher Education Council, Chapter 2, Article 4:

1. To propose the periodical scientific research plans in line with the scientific research strategy of the institution, coordinate with other academic sections and to make the required budget in order to be presented to the board of trustees of the institution for discussion and approval.

2. To set up a mechanism for funding and executing research in the institution.

3. To issue orders and take procedures to organize research activities in the institution.

4. To approve research and study projects, follow up their execution and publication and to fund them.

5. To cooperate with local, regional, and international scientific research centres.

6. To coordinate, supervise and follow up research funded by other sectors outside the institution.

7. To follow up creation and update a data base for scientific publication and research production in the institution.

8. To publish scientific magazines.

9. To prepare the annual scientific research report of the institution and mechanism of expending the annual budget.

10. To follow up and other matters related to scientific research.

Expending mechanism on scientific

UTB implements a transparent and clear mechanism of funding and spending from scientific research budgets on specified objectives of research plan and in accordance with Scientific Research Regulations of the Higher Education Council, Chapter 3, Article 9 - funding scientific research and Chapter 4, Article 10 - expending mechanism on scientific research.

1. Purchasing research equipment and tools including computers and specialized software needed for the research project.

2. Purchasing biological, chemical and physics materials including glassware and tools and others needed for the research project.

3. Purchasing specialized books and scientific periodicals to support certain project however, such books and periodicals shall be given to the institution library after the end of the project.

4. Purchasing databases is required for execution of the research project or payment of subscription fee, therefore.

5. Purchasing specialized scientific tests and metrics or leasing equipment required to execute all or part of the research project.

6. Executing contracts with suppliers to repair and maintain equipment and machines purchased for research projects.

7. Changing existing facilities to accommodate certain research project or a group of projects such as biological safety laboratory or low shaking room or a research facility for animal caring.

8. Scientific publication expenses resulting from publication of researches made by a teaching faculty member in scientific periodicals or conference volumes and folders.

9. Expenses of organizing scientific conferences and scientific symposiums and related academic activities.

10. Travel expenses of a teaching faculty member if he is required to visit a body outside the Kingdom to perform certain research project such as compiling data or using specialized equipment which is only available with that body.

11. Scientific consultation and external services expense if required for the research project.

12. Any other expenses aiming to achieve the research project and of the nature similar to the above-mentioned items. Such expenses shall be subject to financial auditing from the General Secretariat of the Higher Council of Education.

Research Guidelines

Research Guidelines

Preparation and Writing of Research Project

Structure of the Thesis

The thesis/capstone will be conducted independently/Group by student(s). The student will be asked to complete a certificate to confirm that the thesis/capstone is his/her own original work and has been carried out by him/her and to certify that all secondary material has been properly acknowledged in thesis (Appendix A).

The thesis for postgraduate student should be between 15,000 to 25,000 words and 10,000 to 15,000 words for undergraduate students. The full document should include essential parts arranged as follows:

For Bachelor of Science in Business Informatics (BSBI)

Capstone Project Outline
       Title Page
       Approval Sheet
       Dedication
       Acknowledgement
       Capstone Project Abstract
       Table of Contents
       List of Tables
       List of Figures

Chapter 1: THE PROBLEM AND ITS BACKGROUND
       1.1 Introduction
       1.2 Project Framework
       1.3 Statement of Objectives
       1.4 Importance of the Project
       1.5 Definition of Terms

Chapter 2: REVIEW OF RELATED LITERATURE AND SYSTEMS
       2.1 Foreign Literature
       2.2 Local Literature
       2.3 Foreign Systems
       2.4 Local Systems

Chapter 3: TECHNICAL BACKGROUND

3.1 Function and Purpose

3.2 Environmental Considerations

3.3 Specific Requirements
- Overview

3.4 Hardware Requirements

3.5 System Capability

3.5.1 Functional Requirements

3.5.2 Interface Requirements

3.5.3 Operational Requirements

3.5.4 Security Requirements

3.5.5 Safety Requirements

3.5.6 Quality Requirements

3.6 System Management

3.6.1 Installation Support

3.6.2 Diagnostic Tools

3.6.3 Back-up and Recovery

3.6.4 Operational Control

3.7 Operational Characteristics

3.7.1 Capacity Requirements

3.7.2 Performance Requirements

3.7.3 Availability Requirements

3.7.4 Reliability Requirements

3.8 System Architecture

3.8.1 Maintainability Requirements

3.8.2 Training

3.9 Installation of Hardware and Software

3.10 Network Requirements Specification

3.11 User Requirements Specification

Chapter 4: PROJECT DESIGN AND METHODOLOGY

4.1 Project Design and Analysis

Introductory Paragraph
- User Requirements Analysis (Use Case)
- Process Analysis
- Dataflow Flow Diagram (DFD)
- Activity Diagram (AD)
- Functional Decomposition Chart (FDC)
- Data Storage Requirements
- Entity-Relationship Diagram (ERD)
- Storage Design (SD)
- Structure Chart

For Bachelor of Science in International Business (BSIB)

Chapter 1 –Introduction and its Background
    1.1 Introduction
    1.2 Statement of Problem
        1.2.1 Research Question
        1.2.2 Research Objectives
        1.2.3 Research Hypothesis
    1.3 Significance of the Study
    1.4 Theoretical Framework
    1.5 Conceptual Framework
    1.6 Scope and Limitations of the Study
    1.7 Definition of the terms

Chapter 2 – Review of Related Literature and Studies
    2.1 Related Literature
    2.2 Related studies
    2.3 Syntheses

Chapter 3 –Methodology of the Study
    3.1 Research Design
    3.2 Respondent of the study
    3.3 Research Instrument
    3.4 Data Gathering Procedure
    3.5 Validity and Reliability
    3.6 Data Processing and Statistical Treatment of the Data

Chapter 4 – Presentation, Analysis and Interpretation of the Data
    4.1 Presentation of Data
    4.2 Analysis of Data
    4.3 Interpretation and Discussion

Chapter 5 – Findings, Recommendations and Conclusion
    5.1 Summary of Findings
    5.2 Conclusion
    5.3 Recommendations

References
Appendix
Plagiarism Report
Ethical Assessment Form

For Bachelor of Science in Mechatronics Engineering (BSME) and Bachelor of Science in Informatics Engineering (BSIE)

Capstone Project Outline
Title Page
Approval Sheet
Dedication
Acknowledgement
Capstone Project Abstract

Table of Contents
List of Tables
List of Figures

Chapter 1: INTRODUCTION
Chapter 2: BACKGROUND OF THE STUDY
      2.1 Statement of the problem
      2.2 Objectives of the study
      2.3 Significance of the study
      2.4 Scope and Delimitation
      2.5 Definition of Terms

Chapter 3: Review of Related Literature and Studies
      3.1 Conceptual Literature
      3.2 Research Literature
      3.3 Synthesis

Chapter 4: Design Specification
      4.1 Design Paradigm
      4.2 Project Development
      4.3 Design Standards
      4.4 Multiple Design Constraints
      4.5 Project Diagram
      4.6 Project Flow Chart
      4.7 Circuit Diagram
      4.8 Bill of Material
      4.9 Gantt Chart

Chapter 5: Design Procedure, Functional Analysis and Implementation
      5.1 Project Description
      5.2 Functional Analysis
      5.3 Component Specification
      5.4 Evaluation Procedures
      5.5 Economic Viability
      5.6 Cost Benefit Analysis

Chapter 6: Conclusions

Chapter 7: Recommendations

References
Appendices
Plagiarism Report
Ethical Assessment Form

For Bachelor of Science in Computer Science (BSCS)
Thesis Outline
Title page
Approval Sheet
Acknowledgement
Abstract
Table of Contents
List of Figures
List of Tables

Chapter I: The Problem and Its Background
        Introduction
        Background of the Study
        Objectives of the Study
        Statement of the Problem
        Scope and Delimitation
        Significance of the Study
        Definition of Terms

Chapter II: Review of Related Literature and Studies
        Theoretical Background
        Related Literature
        Related Studies

Chapter III: Technical Background
        Technicality of the Project
        Details of the technologies to be Used
        How the Project Will Work

Chapter IV: Research Methodology
        Research Design
        Data Gathering Instrument
        Data Gathering Procedure
        Requirement Specification
        Feasibility Study – Operational Feasibility, Technical feasibility, Economic feasibility
        Constraints
        Design Trade-offs

Chapter V: Presentation of Data, Analysis and Findings
        Requirement Modeling
        Data Process Modeling (DFD),
        Object Modeling (Class Diagram),
        Design
        Output and User Interface Design
        Database Design (ERD)
        Development
        System Specification
        System Testing

Chapter VI: Summary, Conclusions and Recommendations

Bibliography

Appendices
Questionnaire
(System Flowchart, All diagrams)
Research Proposal
Plagiarism Report
Ethical Assessment Form

For Master of Business Administration (MBA)

Thesis Outline
Title Page
Approval Sheet
Dedication
Acknowledgement
Thesis Abstract
Table of Contents
List of Tables
List of Figures

Chapter 1: INTRODUCTION and ITS BACKGROUND
   1.1 Introduction
   1.2 Statement of the problem
   1.3 Significance of the study
   1.4 Theoretical Framework
   1.5 Conceptual Framework
   1.6 Scope and Delimitation of the study
   1.7 Definition of Terms

Chapter 2: REVIEW OF RELATED LITERATURE AND STUDIES
   2.1 Related Literature
   2.2 Related Studies
   2.3 Synthesis

Chapter 3: METHODOLOGY OF THE STUDY
   3.1 Research Design
   3.2 Respondents of the Study
   3.3 Research Instrument
   3.4 Validity and Reliability
   3.5 Data Gathering Procedure
   3.6 Data Processing and Statistical Treatment of Data

Chapter 4: PRESENTATION, ANALYSISAND INTERPRETATION OF DATA
   * Presentation of Data
   * Analysis of Data

* Interpretation of Data

Chapter 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS
    5.1 Summary of Findings
    5.2 Conclusions
    5.3 Recommendations

References
Appendices
Plagiarism Report
Ethical Assessment Form

For Faculty and Staff

Research Project Outline
Title Page
Approval Sheet
Dedication
Acknowledgement
Thesis Abstract
Table of Contents
List of Tables
List of Figures

Chapter 1: INTRODUCTION and ITS BACKGROUND
    1.1 Introduction
    1.2 Statement of the problem
    1.3 Significance of the study
    1.4 Theoretical Framework
    1.5 Conceptual Framework
    1.6 Scope and Delimitation of the study
    1.7 Definition of Terms

Chapter 2: REVIEW OF RELATED LITERATURE AND STUDIES
    2.1 Related Literature
    2.2 Related Studies
    2.3 Synthesis

Chapter 3: METHODOLOGY OF THE STUDY
    3.1 Research Design
    3.2 Respondents of the Study
    3.3 Research Instrument
    3.4 Validity and Reliability
    3.5 Data Gathering Procedure
    3.6 Data Processing and Statistical Treatment of Data

Chapter 4: PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA
* Presentation of Data
* Analysis of Data
* Interpretation of Data

Chapter 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS
5.1 Summary of Findings
5.2 Conclusions
5.3 Recommendations

References
Appendices
Plagiarism Report
Ethical Assessment Form

Format of Writing
The student should follow the following guidelines in writing the thesis/capstone:

1. Paper

Use white A4 size paper. Orientation should be portrait style (can be read lengthwise). Text and figures are placed on only one side of the paper. The other side should be left blank.

2. Language

The official language to be used in writing a thesis/capstone is English. Use only objective, expository English. Idioms, slang, subjective words and phrases, metaphors and undefined acronyms are not acceptable. All sentences must be complete with acceptable grammar and correct spelling.

3. Type Specifications

All submitted drafts of a thesis, dissertation and other related official documents must be type written. Under no circumstances shall a hand-written draft and/or form be accepted for submission. Font should be Times New Roman with twelve-point size for the text. Text color is black. Typing should always be neat, clean and uniform.

4. Margins

a. For the first page of any chapter, the left, top and bottom margins should be40mm wide.

b. For the rest of the pages, the left margin should be 40mm and the top and bottom margins should be 25mm.

c. The right margin is 25mm for all pages. Make sure text is always justified on both sides. Use a five-space indention for every paragraph.

d. Margin specifications are meant to facilitate binding and trimming. All information (text headings, footnotes, illustrations, etc), including page numbers must be within the text area.

5. Spacing

The body of the thesis/dissertation/capstone should be typed double-spaced. The following, however, should be single-spaced:

- Abstract
- Quotations longer than three lines
- References and bibliography (except between entries)
- Headings or subheadings
- Multi-line captions of tables, figures, illustrations, etc.

6. Pagination

Pages should be numbered consecutively throughout the thesis/capstone project, including pages of figures, tables, appendices, and bibliography. Page 1 begins with the first page of the first chapter. Page numbers are not to be enclosed by parentheses, hyphens, or other decorative devices. Preliminary pages preceding the first chapter are numbered using small roman numerals (i, ii, iii, etc). The title page should not be numbered although it is counted as page i. Page numbers are placed at the center of the bottom of each page.

7. Binding

After the student/s successfully defended the thesis/capstone project, integrated all recommendations and revisions, obtained all necessary signatures the manuscript must be photocopied and hard bounded. Undergraduate students must obtain at least three hardbound copies of their approved thesis: one copy for the school library, one for the respective colleges. The following should be lettered in gold from the head to the foot of the thesis spine, using a 24-point font: proponent/s; degree for which the work is submitted; and year of submission. The following particulars should be provided on the thesis cover, using 18-point gold block font: title of thesis; proponent/s; degree; name of school; and year of submission. The layout of the cover is very similar to that of the title page. Postgraduate students must obtain at least three

hardbound copies of their approved thesis: one copy for the school library, one for the national library and one for the dean office. The cover color of the bound thesis for all MBA programmes should be blue.

8. CD Label

For capstone project or design project, the CD case cover follows the format of the Title Page on the hardbound copy.

1. Writing Conventions

Numbers

Spell out all numbers less than ten unless they are attached to units of measurement (e.g. 5kg, 10ml). Use figures for 10 or numbers more than 10. If a sentence begins with a number, write the number in words even if it is more than 10. If a series of figures is to be used, use numerals regardless of the value, example:

- In the room were 4 chairs, 12 boxes, 13 books, 10 files, 9 umbrellas and 8pairs of shoes.
- The number of computer units bought during the last five years was 8, 53, 27, 38 and 52.

Units of Measure

Whenever applicable, use SI units of measurement. Always use internationally recognized abbreviations for units of measure, and do not put a period after them. For example: 20 millilitres (20ml); 2.5 hectares (2.5ha); 3.7 metric ton (3.7mt) 80 kilometres per hour (80kph).

Direct Quotations

Quotations must be copied accurately, word for word, and they must be placed in quotation marks unless they have been formally set off from the rest of the text. Direct quotations must be minimized at all costs, except in some fields such as literature. Extensive use of direct quotations can be quite irritating for the reader. Students must learn to synthesize and paraphrase concepts in their own words and style.

Citation

References must be cited properly, both in the text as well as in the reference list at the end of the thesis. Use APA style.

Grammatical Tenses

As a rule of thumb, use the present tense when referring to previously published work and the past tense when referring to present results of the study. In a thesis, it is normal to go back and forth between present and past tenses. Most of the abstract should be in the past tense because present results are being described. On the other hand, the introduction, discussion, and conclusion should be in the present tense because these chapters usually refer to previously published works.

Thesis/Capstone

The thesis/capstone is assessing internally in UTB by two members of faculty with the same specialization as the topic being presented, and external panel Each examiner evaluates the thesis/capstone independently; they both assign a grade to the thesis and prepare a short report that highlights the strengths and weaknesses of the study.

Defense Guidelines

Thesis Oral Defence form should be filled (Appendix C).

The Thesis/Capstone Adviser must ensure that a thesis or Design Project is complete before including it in the schedule of defense. Complete means that:

- Edited and printed final draft of manuscript.
- Software is available and running.
- The prototype is available and working/functioning.

Undergraduate Defense

The schedule must be submitted to the Dean for approval. The students are advised of their defense schedule no less than 2 weeks before the date of defense. The approved list must be posted in a strategic area in the campus. Final Projects, Capstone, Research Projects, Practicum (Bachelor) and oral presentations are scheduled during faculty members' administrative hours.

Graduate Defense

The schedule must be submitted to the Dean for approval. The Programme Head of MBA fills out the HEC Form requesting the approval of the oral defense and the internal and external panel members, one month prior to the proposed date of defense. This should be communicated to the students while the schedule for defense is submitted to the HEC for approval. MBA Thesis defence is scheduled during faculty members' vacant time.

MBA THESIS ORAL DEFENSE GUIDELINES

PART I: Before the Defense

1. Prior to the actual defense, the members of the panel shall meet among themselves for at least 15 minutes to discuss the flow of the thesis defense process; to explain the role of the chairman, panel, and thesis supervisor; as well as the criteria and forms to be used in the evaluation of the thesis. The examining panel shall be composed of a Chairman (internal), external examiner, and an internal examiner.

2. Ensure that all cell phones and electronic devices (that are not a part of the defense) have been turned off. Recording of the defense is not permitted. Picture-taking is allowed but only for official documentation purposes.

3. The defense proceedings are open to the public as audience-observers (teachers, students, and HEC representatives), but there is no audience participation in any part of the proceedings.

PART II: During the Defense

1. The MBA Programme Head will introduce the candidate and the members of the panel. Briefly outline the examination procedures and the criteria.

2. The candidate will give a presentation that is a brief overview of the research, findings, and conclusions (approximately 30-45 minutes). No questions are allowed at this time.

3. After the presentation, the Chairman of the defense panel will initiate the discussion of the presentation through question and answer. It is expected that all the examiners will cover the entire details of the thesis. The External Examiner will be given the opportunity to be the first to ask questions followed by the internal examiners and last – the chairman, however during the questioning other panels may ask clarification or follow up questions.

4. All throughout the proceedings, the thesis supervisor shall be a silent observer – not answering questions for the student, nor taking down notes on matters raised by the panel.

It is, however, the student's responsibility to write down notes or comments made by the Panel.

5. When the questioning is completed, the Chairman will ask the candidate, the audience and all other individuals who are not members of the panel to leave the room for a recess. The candidate and the adviser shall wait outside of the discussion room and will be recalled returning after the deliberation of the panel.

PART III: After the Defense

During the panel's deliberation, the panel will discuss among themselves the result of the defense proceedings and come up with one of the following judgments:

Judgment	Grading System			
a) PASSED without revision	A+	4.00	95-100	Excellent
	A- to A	3.67-3.89	87 - 94	Very Good
b) PASSED with minor revision	B- to B+	2.67-3.33	76 - 86	Good
	C- to C+	1.67-2.33	64 – 75	Fair
c) PASSED with major revision	D to D+	1.00-1.33	50 –63	Satisfactory
d) FAILED and schedule for re-defense	F	0.00	Below 50	Failed

The Chairman shall confirm the final decision with the panel and complete the panel's comments in a prescribed form.

The Chairman will invite the candidate back into the room to resume the session, discuss the findings and suggestions, and provide a copy to the student.

The judgment, together with the time allotted to reflect all the suggestions of the panel, will be announced by the Chairman. The time allotment to submit the final manuscript is as follows:

a. If PASSED without revision, at the minimum of two weeks after the defense and up to the end of the trimester.

b. If PASSED with minor revisions, at the minimum of three weeks after the defense and up to the end of the trimester.

c. If PASSED with major revisions, at the minimum of one month and up to one month after the trimester has ended.

The candidate, after the defense, continues to discuss the thesis defense findings with the thesis supervisor in improving the final manuscript.

ROLE OF THE CHAIRMAN

1. As the Chairman of the examination committee, he is expected to be impartial and ensure that the treatment of the candidate is fair.
2. The Chairman is responsible for ensuring that the examination is conducted at the level expected for the degree.
3. The defense is a formal event, and part of the Chairman's role is to ensure that all participants conduct themselves appropriately.
4. The Chairman has the authority to ask anybody from the audience to leave the session room if he finds the person disruptive or influencing the candidate.

ROLE OF THE EXAMINER (Internal and External)

1. The examiner shall assess whether the research study meets the criteria for a successful thesis, as outlined in the instructions for the defense score sheet and structure of a master's thesis as per Research Guidelines.
2. The examiner shall provide a review of the strengths and weaknesses of the thesis and recommend revisions in verbal and written form.
3. All examiners (internal and external) shall evaluate and rate the entire proceedings using the same criteria in the score sheet for final defense.

Defense Panel Composition

1. Undergraduate Defense
- The capstone defense panel is composed of two (2) internal panel members and one (1) external panel member whose specializations fall within the topic of the student.
- The external panel shall be a master's degree holder or have an equivalent work experience of three (3) years in related fields.

2. Graduate Defense
- The thesis defence panel is composed of two (2) internal panel members and one (1) external panel whose specializations fall within the topic of the student.
- All the panel members shall be PhD degree holders.

Grading System

For postgraduate students

1. Test 1 Period
   - ➢ Chapter 1 (Introduction)
   - ➢ Chapter 2 (Review of Related Literature)
   - ➢ Research topic proposal Defense

2. Test 2 Period
   - ➢ Chapter 1 - 3 (Introduction to Research methodology)
   - ➢ Proposed questionnaire/Research instrument
   - ➢ Research chapters 1-3 defense

3. Final Period
   - ➢ Chapter 4 (Results and Discussion)
   - ➢ Chapter 5 (Conclusion and Recommendations)
   - ➢ Final oral defense for MBA

For undergraduate students

- ➢ Complete thesis/capstone paper
- ➢ software/prototype
- ➢ Oral defense

Oral Defense for MBA thesis project will be graded as follows (Appendix E):

1. Application of Concepts and Theories	10%
2. Literature Review and References	20%
3. Results and Discussion, and Over-all substance	20%
4. Oral Presentation	50%
	100%

For Undergraduate Capstone project BSME/BSIE (Appendix F):

1. Project assessment	55%
2. Technical Report	25%
3. Oral Presentation	20%
	100%

For Undergraduate Capstone project BSCS (Appendix G):

1. Final Paper	30%
2. Prototype/ Software	35%
3. Oral Presentation	35%
	100%

For Undergraduate Capstone project BSIB (Appendix H):

1. Introduction and Idea Generation	10%
2. Innovativeness	20%
3. Project Marketability	20%
4. Thesis / Project / Capstone Manuscript	25%
5. Oral Presentation	20%
6. Collaborative Work Peer Assessment	5%
	100%

For Undergraduate Capstone project BSBI (Appendix I):

1. Introduction and Idea Generation	10%
2. Innovativeness	20%
3. Project Marketability	20%
4. Thesis / Project / Capstone Manuscript	25%
5. Oral Presentation	20%
6. Collaborative Work Peer Assessment	5%
	100%

Research Student Satisfaction Survey

- Research students' satisfaction survey will be conducted to undergraduate and postgraduate thesis students after submission of their final manuscript.
- The College Dean discusses the results of the survey to the undergraduate and postgraduate supervisors and concerned offices in a trimestral basis to identify measures which may be done to maintain good practices and improve weaknesses.

Supervisory Process

Selection of Supervisor

UTB provides student(s) with a supervisor, based on the area of research specialism the supervisor has in relation to the research topic. UTB informs student(s) about research opportunities and projects available in colleges, which will be posted on the college website under each supervisor's name. Once each student is allocated a supervisor it is expected that the student will work with that supervisor until the completion of the thesis.

Supervisors Qualification

Any Faculty member who is a full-time member of the UTB is eligible to serve as a postgraduate student supervisor. The faculty member can be: Full Professor, Associate Professor, and Assistant Professor. In addition to the PhD certificate, other appropriately qualified faculty members with professional certificates may be approved to serve as a supervisor.

Withdrawal of a supervisor

If a student's supervisor resigned from the University, a new supervisor who is a full-time member of the college must be appointed. If the student has a problem with his/her supervisor, the dean of the college must appoint another supervisor to carry on the supervision process.

Processes of Supervision
- Supervisor's experience of the various methods and areas of research.
- Availability of the supervisor during research period.

The Roles and Responsibilities of the Supervisor
1. Guide the student in the selection and planning of a meaningful and appropriate research topic that can be successfully completed within allowable time limit for the graduate programme.
2. Ensure student understands the relevant theories, knowledge, and background literature, and the methodological and technical skills necessary for the research.
3. Ensure that the research environment is safe, equitable, and free from discrimination.
4. Establish a practice of regular meetings with the student at which all matters relating to the research project can be discussed.
5. Provide commentary, constructively and within a reasonable timeframe, on the student's oral and written work. This should include:

a. Being reasonably accessible for unscheduled meetings

b. Keeping track of progress and investigating any concerns

6. Alert the student to what they may expect from the supervisor by way of a critique of work.

7. Monitor progress according to agreed milestones (and revising same based on issues).

8. Ensure that the student is familiar with the University policy on plagiarism.

9. Encourage student to attend relevant taught modules

10. Assist and encourage the wider professional development of the student by means such as:

a. Participation in seminars and colloquia

b. Attendance and presentation of work at local, regional, and international conferences or fora.

11. Provide guidance on the preparation of the thesis and oral defense presentation.

12. Complete annual progress report in conjunction with the student in order to monitor the student's progress and highlight any unexpected problems which has to be addressed.

13. Assist in the selection thesis panel during the thesis defense of the student.

The Roles and Responsibilities of Student

For a successful student-supervisor relationship the student must be familiar and adhere to the rules, policies, guidelines, and procedures in place for the supervision of thesis at the graduate programme. Hence, every research student will:

1. Liaise with the supervisor in the selection of research topic which can be completed as a thesis and written up within the prescribed period of study.

2. Agree with the supervisor the basic structure of thesis/research project, an appropriate research method, a realistic plan of work, and any additional required study needed for the successful implementation of the thesis.

3. Work with the supervisor in developing important milestones and timelines such as: establishing a thesis topic; completing a literature review; achieving intermediate research goals; attending conferences; publishing paper; analyzing data; and completing drafts of the thesis.

4. Inform the supervisor of progress according to agreed milestones.

5. Establish a practice of regular meetings with the supervisor at which all matters relating to the thesis/research project can be discussed.

6. Letting the supervisor know how you can be contacted, when you will be unavoidably absent, and informing your supervisor of anything significant that may affect your academic progress.

7. Be familiar with the University policy on plagiarism.

8. Complete annual progress report in conjunction with the supervisor in order to monitor progress and highlight any unexpected problems which has to be addressed.

9. Present work in progress, and attend relevant conferences, meetings and workshops.

10. Liaise with the supervisor during preparation of the thesis and oral defense presentation.

11. Maintain records of the thesis in a manner which can be accessed and understood by anyone with a legitimate right to enquire.

Level of Supervision

One of the main responsibilities of the supervisor is to prepare student progress monitoring report of the thesis/capstone (Appendix D). This report identifies the level of the thesis progress that is done by the student. If the level of the progress is not satisfied the supervisor must suggest some recommendations or ask for help from advising thesis committee.

Conduct of Meeting and Supervision

1. The supervisor will conduct meetings in order to hear and give advice on reports of the student's progress and to answer reasonable questions. Supervisors will respond to students' questions within 5 working days. If the supervisor is unable to give an answer to a question, she/he will contact the student with the answer no more than five workings days after the meeting. Meetings records are shown in Appendix E.

2. The supervisor should attend all pre-arranged meetings or provide a notice of non-attendance, giving the student a series of alternative dates for the meeting.

3. The supervisor will be fully prepared for all meetings, having considered answers to all reasonable questions submitted by the student, and giving the best advice to assist the students to achieve their goals.

4. The supervisor will/ or will not interfere in the direction or objectives of the thesis.

5. The supervisor may look at outlines of work and will read drafts.

6. Students will not expect supervisors to correct grammar, but some supervisors may do so.

Conduct of Research Student Satisfaction

4. The MBA Programme Head conducts research student satisfaction survey to MBA thesis students after the submission of the final manuscript

5. Results are tabulated, computed, summarized, and submitted to the Dean every trimester.

6. The College Dean discusses the results of the survey to the MBA supervisors and concerned offices in a trimestral basis to identify measures which may be done to maintain good practices and improve weaknesses.

Library Resources

Library Resources

The UTB Library can help students with all the information they need. The library is located in the main building of the UTB. The library has well-trained staffs who can assist them in locating the information either print or no-print materials. The library can be reached at Tel :(+973) 17787963. The UTB library provides a range of up-to-date information in all fields of sciences. There are collections of textbooks to cover the requirements of the College's undergraduate courses; journals to support the College research activities; website access to a range of e-websites for publications including:

UTB Online Database Resources (http://libresources.utb.edu.bh)

Online Database Resources

1. ACM Digital Library

2. ASPP – IEEE

3. IEEE Online Standards

4. EBSCO Online Database:

   - Academic Search Primer.

   - Business Source Primer.

   - Regional Business News.

   - ERIC (Education Resource Information Center).

5. AIS (Association of Information Society).

UTB LIBRARY SYSTEM (http://libsys.utb.edu.bh)

Officially enrolled students are required to register through any of the library staff for the usernames and passwords to access the library system and online databases.

How to access the Online Databases:

1. Log in through the assigned username and password.

2. Select a database.

3. Click the search box.

4. Search result will be displayed.

5. Refine your result by using the following:

   - Full text / what I can access.

   - Publication Year

- Subscribed Titles / Journals
- Author

6. Read the summary of each database to provide you with more helpful tips on how to use the resources.

The UTB library provides a high-quality study environment with both personal and collaborative study facilities, such as, places to read, computers, and I-pads.

Guidelines on Using

Plagiarism

Guidelines on using Plagiarism

UTB uses a proper detection Turnitin plagiarism system to scan work for evidence of plagiarism. This system has access to many sources worldwide (journals, books, articles, magazines, websites and more.)

The Turnitin plagiarism system will need work to be submitted electronically (soft copy) as well as in paper form (hard copy). To strengthen the intellectual ethics and the anti-plagiarism best practices at UTB, the following are implemented for students.

Guidelines on using plagiarism software for student's work.

1. Before a student or group of students is allowed to schedule for final oral presentation, he/she/they must submit the final draft of his/her/their document to the advisor.
2. After the evaluation of the submitted document, the advisor notifies the student(s) to upload the document into the check for plagiarism software – licensed for UTB use.
3. The advisor downloads the documents into the check for plagiarism software and notifies the student or group of students on the result of the anti-plagiarism report.
4. For thesis, capstone, design project, similarity index should not exceed 20 %.
5. For practicum/industrial attachment, similarity index should not exceed 20 % including bibliography.
6. Only a student or group of students who meets the prescribed threshold is allowed to schedule his/her/their oral presentation.
7. A student or group of students who did meet the prescribed threshold is given a chance to revise the document. After revision, follow the same process specified in guidelines 1-5.
8. The anti-plagiarism report as mentioned in 1-5 should be part of the cited reports as appendix.
9. Any violation of research ethics and plagiarism policy will subject a student or group of students to the university penalties.

How to access the plagiarism software:

Log in to www.turnitin.com
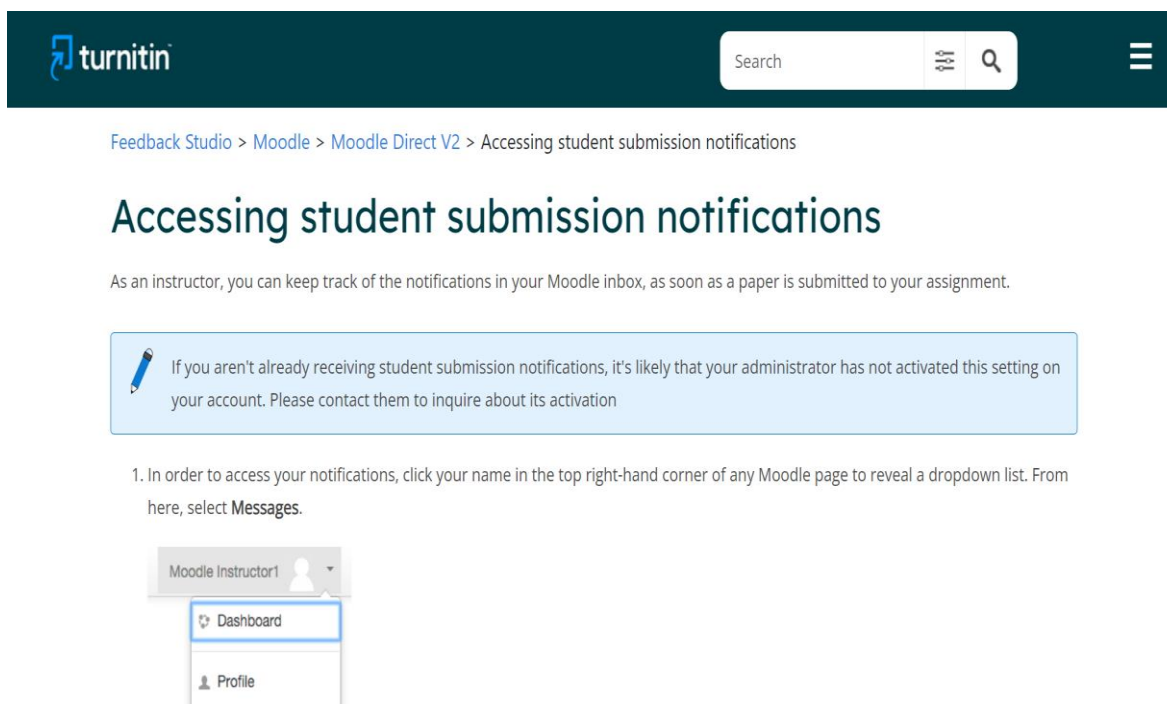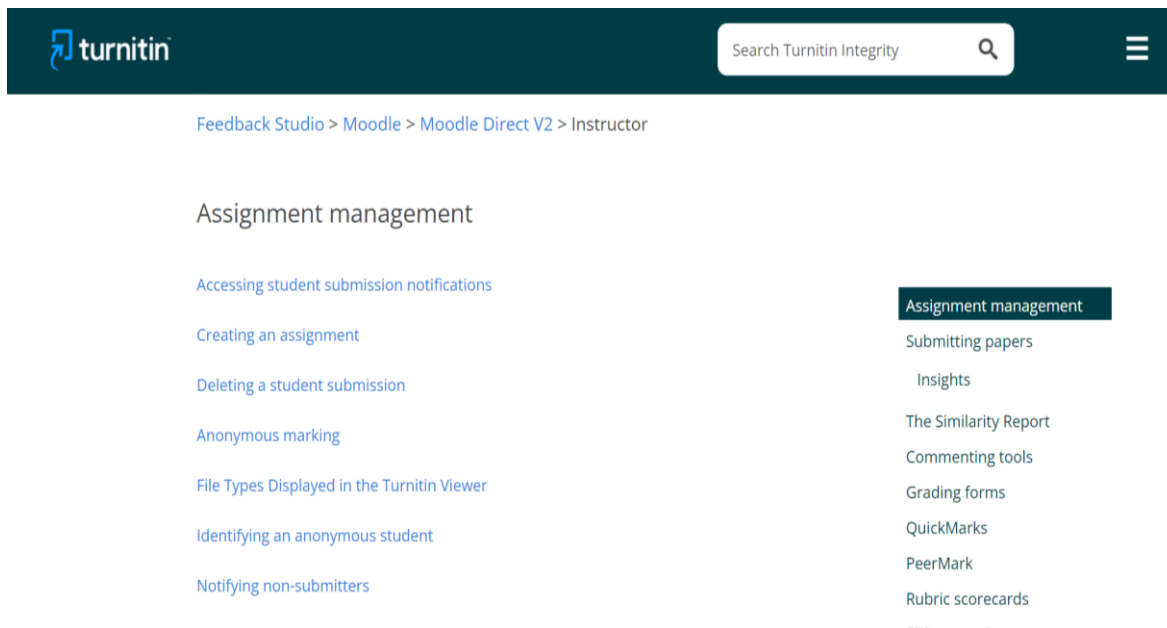
Appendices

Appendices

Appendix A: UTB UNDERGRADUATE

AND POSTGRADUATE RESEARCH CERTIFICATION

Thesis Title: _____

Supervisor Name: _____

Student Name: _____

1. *I confirm that the work in this Research Project is original, that there is no conflict of interest and that it has been carried out by me.*

2. *I confirm that all secondary material has been properly acknowledged by me and referenced in this thesis.*

Name: _____

Signed: _____

Date: _____

Appendix B: Approval Sheet

This thesis entitled, "_____", prepared by _____ is hereby recommended for oral examination.

Thesis Adviser

Approved by the Panel of Oral Examination with a grade of _____

--------------------------------   ----------------------
Panel Member   Panel Member

External Member

Final Approval

Accepted and approved in partial fulfilment of the requirements of for the degree,

_____

_____

Dean, College of _____

_____

VP, Academic Affairs

Appendix C: THESIS ORAL DEFENSE APPLICATION FORM

	Doc. No.	QR-AAD-011
University of Technology Bahrain	Issue No.	01
	Revision No.	00

College/Department:

THESIS ORAL DEFENSE APPLICATION FORM	

THE DEAN

This is to certify that Mr. / Ms._____,

a candidate for the degree _____ major in _____,

had satisfactorily completed the thesis / project entitled: _____

_____

_____

under my / our supervision and is now ready to defend it. _____

_____

Signature over Printed Name of   Signature over Printed Name of Thesis
Writing Adviser   Thesis Writing Professor

THESIS ORAL DEFENSE APPROVAL

Thesis Proposal Verification		Thesis Writing Verification			
Date of Enrollment		Date of Enrolment			
Approved Title		Approved Title			
Remarks (if any)		Remarks (if any)			
Schedule of Oral Examination	Date	Day	Time		Room

Panel Members		

Recommending Approval	Approved by
Thesis Writing Adviser	
Programme/ Department Head	Dean
Associate Dean	

Appendix D: RESEARCH PROGRESS MONITORING REPORT

University of Technology Bahrain	Doc. No.		QR-AAD-010
	Issue No.		01
	Revision No.		00
College/Department:			
RESEARCH PROGRESS MONITORING REPORT			Page _of _

Program		Course	
Proponent(s)/Student(s)			
Title			
Expected Completion Date (Show as per Gantt Chart)			

Date	

To be accomplished by the Proponent(s)/Student(s)	To be accomplished by the Professor
Completed Chapter(s)/Parts	Comments and/or Suggestions
Chapter / Part in Progress	Comments and/or Suggestions
Difficulties Encountered	Comments and/or Suggestions
Changes from Previous Plan, if Any	Comments and/or Suggestions

_____   _____

Proponent(s)/Student(s)   Professor

Note : This progress report form must be accomplished by the student(s) and professor for monitoring the research progress of the students. This form must be included as part of the documentation submitted upon completing the thesis/research/project/business plan.

_____
_____

Appendix E: SCORE SHEET FOR FINAL DEFENSE FOR MBA THESIS

University of Technology Bahrain		Doc. No.	QR-RPD-058
		Issue No.	01
		Revision No.	00

College/Department:			
SCORE SHEET FOR FINAL DEFENSE FOR MBA THESIS			
Name of Proponent(s)		Presentation Date	
Degree		Place	
Major		Time	
Thesis Title			
Supervisor			

Criteria	Weight (%)	Rating	Remarks / Suggested Improvements
Application of Concepts and Theories *-Appropriate business concepts and theories are discussed and correctly applied.*	10%		
Literature Review and References **-***Sentences are well-written; there are no incorrect word choices and the text is free of errors in grammar, punctuation and spelling.* *-All sources are correctly and thoroughly documented; appropriate citation forms are utilized throughout.*	15%		
Results and Discussion, and Over-all substance *The description, relevance, scope and other elements of the thesis are clear and well-stated.* *The results are comprehensively discussed*	35%		
Oral Presentation *-Quality of thesis presentation and ability to defend thesis*	*40%*		
Totals	100		

Rated by	Recommended for Approval by	Approved by
_____	_____	_____
Panel Member	Programme Head	College Dean
Date: _____	Date:----------------------	Date:------------------------

Appendix F: SCORE SHEET FOR FINAL DEFENSE FOR COE CAPSTONE PROJECT

	Doc. No.	QR-AAD-013
University of Technology Bahrain	Issue No.	01
	Revision No.	00

College/Department:

SCORE SHEET IN ORAL DEFENSE OF DESIGN PROJECT B

Academic Year		Term	
Name		Presentation Date	
Student ID No.		Place	
Degree		Time	
Major			
Project Title			
Adviser			

Criteria	Weight	Rating	
1. Project Assessment			
a. Literature Survey	5%		
b. Coverage and use of modern engineering tools	20%	55%	
c. Meeting project constraints and standards (economic, environment, health and safety,)	20%		
d. Design Experience	10%		
2. Technical Report			
a. Appropriateness of abstract to the project	3%		
b. Introduction and background of the study	3%		
c. The ability to identify and solve engineering problems	3%		
d. Methodology and Techniques		25%	
e. Results and Discussions	3%		
f. Conclusions and Recommendations	5%		
g. Report Layout	3%		
	5%		
3. Oral Presentation			
a. The ability to function on multi-disciplinary teams	5%		
b. Style/Flow of Presentation		20%	
c. Confidence about the subject	5%		
d. The ability to communicate effectively	5%		
	5%		
Total		100%	

_____
Rater Signature over Printed Name

Summary of Design Project Committee Ratings

Panel	Percentage	Name	Signature
Committee Chair	%		
External Panel	%		
Member	%		
Member	%		
Average	%		

Appendix G: SCORE SHEET FOR FINAL DEFENSE FOR CCS THESIS

![University of Technology Bahrain]		Doc. No.	QR-AAD-013
		Issue No.	01
		Revision No.	00

College/Department:

SCORE SHEET IN ORAL DEFENSE OF BSCS THESIS

Name		Presentation Date	
Degree		Place	
Major		Time	

Thesis Title	
Adviser	

Criteria	Weight		Rating	
1. Final Paper		30%		
a. Originality / Inventiveness	15%			
b. Quality of thesis manuscript	15%			
2. Prototype / Software		35%		
a. Conceptual and Logical Design	20%			
b. Workability and Application	15%			
3. Oral Presentation		35%		
a. Quality of Thesis Presentation	20%			
b. Ability to Defend the Thesis	15%			
Total		100%		

_____
Rater Signature over Printed Name

Summary of Thesis Committee Ratings

Panel	Percentage	Name	Signature
Committee Chair	%		
Member	%		
Member	%		
Average	%		

Appendix H: SCORE SHEET FOR FINAL DEFENSE FOR BSIB THESIS

University of Technology Bahrain		Doc. No.	QR-RPD-058
		Issue No.	01
		Revision No.	00
College/Department:			
SCORE SHEET FOR FINAL DEFENSE FOR BSIB THESIS			

Thesis / Project/ Capstone Title	
Presentation Date	
Place	
Time	

Sl. NO	Name of the Students	Student ID No	Oral Presentation (Out of 20)	Collaborative Work (Out of 5) Peer Assessment
1				
2				
3				
4				
5				
6				

Common Marking Criteria	Weight (%)	Rating	Remarks / Suggested Improvements
Introduction and Idea Generation *Originality, Reality and Functionality of the Idea*	10%		
Innovativeness *Feasibility and Value Adding*	20%		
Project Marketability *Promotion Strategies and Target Audience are Well Defined*	20%		
Thesis / Project / Capstone Manuscript *Final Submitted Manuscript*	25%		
Totals	100		

Panel Signature over Printed Name:

_____
Examiner / Evaluator

Date:-----------------------------------

Recommended for Approval by

_____
Thesis Coordinator

Date:----------------------------

Approved by

_____
Programme Head

Date:-----------------------------------

Appendix I: SCORE SHEET FOR FINAL DEFENSE FOR BSBI CAPSTONE PROJECT

University of Technology Bahrain	Doc. No.	QR-RPD-058
	Issue No.	01
	Revision No.	00

College/Department:	
SCORE SHEET FOR FINAL DEFENSE FOR BSBI CAPSTONE PROJECT	

Thesis / Project/ Capstone Title	
Presentation Date	
Place	
Time	

Sl. NO	Name of the Students	Student ID No	Oral Presentation (Out of 20)	Collaborative Work (Out of 5) Peer Assessment
1				
2				
3				
4				
5				
6				

Common Marking Criteria	Weight (%)	Rating	Remarks / Suggested Improvements
Introduction and Idea Generation *Originality, Reality and Functionality of the Idea*	10%		
Innovativeness *Feasibility and Value Adding*	20%		
Project Marketability *Promotion Strategies and Target Audience are Well Defined*	20%		
Thesis / Project / Capstone Manuscript *Final Submitted Manuscript*	25%		
Totals	100		

Panel Signature over Printed Name:	Recommended for Approval by	Approved by
_____ Examiner / Evaluator	_____ Thesis Coordinator	_____ Programme Head
Date:-------------------------------------	Date:-----------------------------	Date:-------------------------------------

Appendix J: Sample Timeline

Term: _____ SY: _____	Teaching Weeks	Days	Activities
TEST 1	W1	1	Meetings
		2	
		3	
		4	
		5	Submit Research Outline
	W2	1	Meetings
		2	
		3	
		4	
		5	
	W3	1	
		2	
		3	
		4	
		5	
	W4	1	
		2	
		3	
		4	
		5	Supervisor and UTB approval of research outline
TEST 2	W1	1	Meetings + Student work towards completing research proposal
		2	
		3	
		4	
		5	
	W2	1	
		2	
		3	
		4	
		5	
	W3	1	
		2	
		3	
		4	
		5	
	W4	1	
		2	
		3	
		4	
		5	Supervisor and UTB Approval for research outline
FINAL	W1	1	Meetings + Student work towards submitting Thesis
		2	
		3	
		4	
		5	
	W2	1	
		2	

Term: _____ SY: _____	Teaching Weeks	Days	Activities
		3	
		4	
		5	
	W3	1	
		2	
		3	
		4	
		5	
	W4	1	
		2	
		3	
		4	
		5	SUBMIT THESIS

Appendix K: Research Student Satisfaction Survey

INTRODUCTION

This questionnaire is designed to determine your current level of satisfaction with your experience at UTB as a research student. Its purpose is to identify aspects of the University's operation and services which are performing well and those which need improvement.

We intend to follow up those areas which most respondents identify as needing significant improvement. So, to ensure that your views are considered, please make every effort to fill out and return the questionnaire.

The Questionnaire is divided into several sections. The data collected in this survey may be used in research aimed at improving the quality of learning and teaching at UTB. In reporting this research in presentations and publications individuals will never be identified.

INSTRUCTIONS

For each item, please fill in the box which best describes your rating of its satisfaction. Rank how satisfied you think each aspect is on the five-point importance scale.

5-very satisfied   4-satisfied   3-moderately satisfied   2-slightly satisfied   1-not satisfied

A. ACADEMIC SUPPORT

With the following items we seek your views on the satisfaction of various aspects of the academic support provided for you as a research student. For each item, please fill in the box which best describes your rating of satisfaction.

ITEMS	Satisfaction				
IN RELATION TO MY RESEARCH, MY ADVISER/S:	**5**	**4**	**3**	**2**	**1**
1. Are available when I need them					
2. Give me sufficient support in defining my topic					
3. Give me sufficient support in planning my research work					
4. Give me sufficient support in doing literature searches					
5. Give me sufficient support in planning and writing my thesis					
6. Give me timely feedback when I submit written material					
7. Have clearly explained issues such as intellectual property, confidentiality, research ethics & plagiarism					
8. Encourage me to publish my work					
9. Encourage me to give conference papers					
10. Provide expert advice on my area of research					
11. Meet/s my expectations about agreed working protocols (eg., work turn-around, availability)					
12. Manage/s the advisory panel arrangement effectively					
13. Assist/s me with judging my progress against an agreed timeline					
14. Clearly advise me on the structure of my thesis, the technical specifications, layout, binding and so on					
15. Clearly advise me on the standard of work required for my thesis					
16. Clearly advise me on what will happen during the thesis examination process					

B. Outcomes of your study

The following items concern which outcomes of the research degree you are undertaking at UTB that are most satisfied to you and the extent to which you feel the degree promotes these outcomes. For each item, please fill in the box which best describes your rating of its satisfaction to you and your experience.

ITEMS	Satisfaction				
MY RESEARCH DEGREE PROMOTES THE DEVELOPMENT OF:	**5**	**4**	**3**	**2**	**1**
1. An ability to think critically					
2. An ability to solve problems successfully					
3. A capacity for creativity and innovation					
4. Up-to-date knowledge and skills in my field					
5. Ethical values in human and/or animal research					
6. A respect for alternative viewpoints					
7. Capacity to manage my time effectively					
8. An ability to see how the outputs of my research might productively be used					
9. The skills necessary to plan and undertake independent study and research					
10. Knowledge of intellectual property issues such as copyright, patents, confidentiality					
11. Skill in oral and written communication					
12. Ability to contribute to scholarship in my discipline or field					
13. The ability to work as a member of a team					
14. An ability to handle the unexpected effectively					
15. A capacity to contribute to the development of professional practice in my field					
16. Understanding of the need for validity and accuracy in the conduct of research					
17. Understanding of the need for presentation and discussion of work at scholarly meetings					

C. Research Resources Policy

The following questions concern the University's 'Research Resources' Policy. All research students are covered by this policy. For each item, please fill in the box which best describes your rating of its satisfaction to you.

ITEMS	Satisfaction				
Research Higher Degree Candidature Essential Resources Policy:	**5**	**4**	**3**	**2**	**1**
1. Provides adequate support in securing resources					
2. Is well administered by my college					
3. Allows equal access to resources to all students					
4. Encourages students to spend time on campus					
5. Has been clearly explained and I know how to access the resources I am entitled to					
6. Has clear pathways to follow in accessing resources					

D. Library

The following items seek your views on the satisfaction of a range of services provided by UTB library. For each item, please fill in the box which best describes your rating.

ITEMS	satisfaction				
UTB LIBRARY SERVICES meet my needs in the following areas:	**5**	**4**	**3**	**2**	**1**
1. Library Desk Service					
2. Provision of quiet study areas					

	5	4	3	2	1
3. Assistance provided by Library staff					
4. Inter-library loan services					
5. Remote access to UTB and other library catalogues					
6. Electronic Access to Library resources					

E. Research Culture

The following questions are in regard to the Research Culture at your College/Research Centre/School/Research Group. For each item, please fill in the box which best describes your rating.

ITEMS	Satisfaction				
Research Culture	5	4	3	2	1
1. My College/Research Centre/School/Research Group promotes a research culture					
2. I feel included in College/Research Centre/School/Research Group culture.					
3. The research culture of my College/Research Centre/School/Research Group is adequate for my needs.					

F. Computing and Infrastructure

The following items seek your views on the satisfaction of a range of computing infrastructure and research support services provided by UTB. For each item, please fill in the box which best describes your rating.

ITEMS	Satisfaction				
UTB COMPUTING FACILITIES meet my needs in the following areas:	5	4	3	2	1
1. Quality of computing equipment					
2. Quality of software					
3. IT Help and Support					
4. Availability of computers					
5. Technical support and repairs					
MY RESEARCH SUPPORT & INFRASTRUCTURE NEEDS are met in the following areas:	5	4	3	2	1
6. UTB working space and facilities					
7. Working space and facilities other than UTB					
8. Orientation by the Office of Research Services					
9. UTB College forum and events					
10. Timely information about seminars and workshops					
11. Knowing where to go in my College for assistance if I have issues about my research or supervision					
12. Knowing where to go at UTB for assistance about research or supervision issues which the College is unable to resolve					

Appendix L: ETHICAL ASSESSMENT FORM

APPLICATION FOR ETHICAL APPROVAL OF A RESEARCH PROJECT

This application form is to be used by faculty, staff and students seeking ethical approval for an individual or group research project.

A completed version of this document should be submitted to the research center in the College. Applications must be completed on this form; attachments will not be accepted other than those requested on this form.

 Research must NOT begin until approval has been received from the appropriate Research Centre.
****
****

Section 1: Applicant Details

Applicant Name	
Contact Email	
Academic Unit	
Applicant Type	□Faculty □Staff □Undergraduate □Postgraduate

Section 2: Project Details

Project Title	
Organization/s involved & Locale of the Study	
Proposed Start / End Date (dd/mm/yyyy)	Start Date: End Date:
Category	□ Faculty/Staff Research □ Undergraduate Research □ Postgraduate Research
Preliminary Ethical Flag(s)	□ Animals □ Environment □ International □ Data □ Humans Non-Clinical
Supervisor (Student Research only)	
Is this a re-approval of an existing project?	□Yes □ No

Project type: Please mark the predominant nature of this project	□ Questionnaire / Survey □ Experiments □ Observational □ Data based □ Other- define:
Has Peer Review taken place	□Yes By: _____ □ No

Section 3: Project Outline & Proposed Research methods

a. Project outline and aims.

Briefly describe the aims of this research, including the anticipated benefits and risks. This description must be in everyday language. If any jargon, technical terms or discipline-specific phrases are used, these should be explained. Please use no more than 500 words.

b. Proposed research methods (_____)

Please provide an outline, in layman's terms, of the proposed research methods. Specify whether the research will take place inside or outside of the Bahrain or in collaboration with partners based outside Bahrain, and/or if research will take place using the internet. Present an outline of the method in a step-by-step chronological order and avoid using jargon and technical terms as much as possible. Ensure you describe the key tasks including how data will be collected and used. Please do not exceed 500 words.

c. Expected outputs and value of the project.

Briefly describe the expected outputs and educational, social, or scientific value of the project. This description must be in everyday language. If any jargon, technical terms, or discipline-specific phrases are used, these should be explained. Please use no more than 500 words.

Section 4: Environment

(Complete this section only if the project was flagged 'environment' at preliminary review.) Please provide the locations in which your research will take place, together with the anticipated risks (destruction of habitat or artifacts/emissions, etc.), potential damage and mitigating measures planned. Please use no more than 700 words.

Section 5: Human participants in a Non-Clinical Setting (Complete this section only if the project was flagged 'Human Participants in a Non-Clinical Setting' at preliminary review)

Participant Details

Does this research specifically target participants recruited by virtue of being (select all that apply):	□ Students or faculty/staff of this University □ Adults (over the age of 18 years and competent to give consent) □ Children/legal minors (anyone under the age of 18 years) □ Person's incapable of giving informed consent □ People from non-English speaking backgrounds
Source and means by which participants are to be recruited:	

Participant Information

	YES	NO
Will you inform participants that their participation is voluntary?	□	□
Will you inform participants that they may withdraw from the research at any time and for any reason?	□	□
Will you inform participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	□	□
Will you provide an information sheet that will include the contact details of the researcher/team?	□	□
Will you obtain written consent for participation?	□	□
Will you debrief participants at the end of their participation (i.e., give them an explanation of the study and its aims and hypotheses)?	□	□
Will you provide participants with written debriefing (i.e., a sheet that they can keep that shows your contact details and explanations of the study)?	□	□
If using a questionnaire, will you give participants the option of omitting questions that they do not want to answer?	□	□
If an experiment, will you describe the main experimental procedures to participants in advance, so that they are informed about what to expect?	□	□
If the research is observational, will you ask participants for their consent to being observed?	□	□

Participant Consent

Please describe the arrangements you are making to inform participants, before providing consent, of what is involved in participating in your study and the use of any identifiable data, and whether you have any reasons for withholding particular information. Due consideration must be given to the possibility that the provision of financial or other incentives may impair participants' ability to consent voluntarily. (No more than 300 words)

Potential risk to participants and risk management procedures

Identify, as far as possible, all potential risks (small and large) to participants (e.g. physical, psychological, etc.) that may be associated with the proposed research. Please explain any risk management procedures that will be put in place and attach any risk assessments or other supporting documents. Please answer as fully as possible. (No more than 300 words)

Section 6: Data

Please attach a copy of your data management plan (if available) or alternatively note where appropriate: whether consent will be sought, how data will be accessed, how participants' confidentiality will be protected, and any other relevant considerations. Information must be provided on the full data lifecycle, from collection to archive.

Section 7: Permissions (Including Overseas)

Overseas: For any research conducted outside Bahrain the researcher is responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. If relevant, please complete the table below otherwise move on to the permissions table.

Is the research to be conducted outside the Bahrain?	□Yes	□ No
If 'Yes' please state the location(s):		
Have the appropriate local ethical considerations been complied with and relevant permissions sought?	□Yes	□ No

Permissions: Please use the table below to record details of licenses or permissions required and / or applied for e.g. governing body, etc along with the reference, status and the date when it was granted.

Awarding Body	Reference Number	Date of Permission	Status e.g. Granted / Pending

Section 8: Risk Considerations

Potential risk to researchers and risk management procedures. What are the potential risks to researchers themselves? This may include personal safety issues, such as those related to lone or out of normal hours working or to visiting participants in their homes; travel arrangements, including overseas travel; and working in unfamiliar environments. Please explain any risk management procedures that will be put in place and attach any risk assessments or other supporting documents. (No more than 300 words)

Section 9: Supporting documentation

Please supply copies of any applicable and documents in support of your answers. Ensure that attached files have appropriate file names.

Document	Attached
Participant consent form	□
Participant information sheet	□
Questionnaire(s)	□
Project risk assessment	□
Travel risk assessment	□
Data management plan	□
Peer review evidence (Internal / non funded)	□
Local permissions / licenses	□
Other ethical review forms	□
Others (please list):	□

Section 10: Declaration

I certify that the information contained in this application is accurate. I have attempted to identify the risks that may arise in conducting this research and acknowledge my obligations and the rights of the participants. I confirm that the research will be conducted in line with all University, legal and local ethical standards.	
Name of Principal Investigator:	
Signed:	
Date:	

The appropriate Ethics Committee has considered the ethical aspects of this proposal. The committee recommends that the project be:

□ approved   □ deferred (for reasons attached) □ not approved

Name of Committee Member:	
Ethics Committee Concerned:	
Signed:	
Date:	

University of
Technology
Bahrain