



**Degree of Master of Science (By Research)**  
**List of Potential Research Topics**  
**Intake October 2026**

Applicants for the M.Sc. (by Research) course offered by the Faculty of Health Sciences are advised to choose a research topic from the following list and to contact the respective Department offering the research topic at the earliest opportunity so that they can receive the necessary guidance. If an applicant would like to propose a research topic not listed below, the applicant may discuss this with the respective Head of Department.

**Applied Biomedical Sciences**

- Computational and Experimental Methods in Erythropoiesis - Prof. Joseph Borg
- Dissecting the Molecular Mechanisms of Blood Transcriptomic Endotypes in Sepsis - Dr Brendon Scicluna
- High Throughput Sequencing - Prof. Stephanie Bezzina Wettinger
- Host Response Biomarkers for Diagnosis and Risk Stratification in Sepsis - Dr Brendon Scicluna
- Genetics and Genomics of Rare Diseases - Prof. Rosienne Farrugia
- Genetics of Myocardial Infarction - Prof. Stephanie Bezzina Wettinger
- Genetics of Osteoporosis and Musculoskeletal Disorders - Prof. Melissa Marie Formosa Friggieri
- Identification of Single Chain Variable Fragment (scFv) Antibodies Specific to Immune Checkpoints by Phage Display - Prof. David Saliba
- Liquid Biopsies for Early Cancer Detection - Dr Laura Grech
- Mechanisms of Inflammatory Adaptations in Innate Immune Cells - Dr Brendon Scicluna
- Multi Omics of Space Flight Experiments and Model Organisms - Prof. Joseph Borg
- Regulation and Control of Globin Gene Switching - Prof. Joseph Borg

**Clinical Biomechanics**

- Cadaveric Foot - Prof. Alfred Gatt
- Gait Analysis - Prof. Alfred Gatt
- Motion Capture - Prof. Alfred Gatt
- Material Testing - Prof. Alfred Gatt
- Orthotics and Prosthetics - Dr Jesmond Attard

## **Food Science, Nutrition and Dietetics**

- Antimicrobial Packaging Applications in Food Science - Dr Foteini Pavli
- Aspects of Lifestyle/Dietary/Purchasing Behaviours and/or Weight Management - Dr Claire Copperstone
- Dietary Patterns and Other Lifestyle Factors in Cancer Prevention - Dr Petra Jones
- Dietary Interventions in the Management of Chronic Conditions (Diabetes, Cancer, Neurodegenerative Diseases) - Dr Mario Caruana Grech Perry
- Edible Films and Coatings for Sustainable Packaging - Dr Foteini Pavli
- Inequalities, Food Security and Sustainable Diets - Dr Claire Copperstone
- Maternal Nutrition: Preconception Care, Pregnancy and Lactation - Dr Petra Jones
- Molecular Interventions in Lifestyle-Related Diseases - Dr Mario Caruana Grech Perry
- Plant-Based Diets for Human and Planetary Health - Dr Petra Jones
- Probiotic Solutions for Functional Foods - Dr Foteini Pavli
- Tackling Biofilms in Food-Related Abiotic Surfaces - Dr Foteini Pavli
- Understanding the Functional Activity of Polyphenols - Dr Mario Caruana Grech Perry

## **Health Systems Management and Leadership**

- Evidence-Based Healthcare - Dr Patricia Vella Bonanno
- Financial Protection - Dr Kenneth E. Grech
- Health Systems Development and Resilience - Dr Kenneth E. Grech
- Leadership and Patient Safety - Prof. Sandra Buttigieg
- Medicines Management - Dr Patricia Vella Bonanno
- Regulation in Healthcare - Dr Patricia Vella Bonanno
- Second Victims and Patient Safety - Prof. Sandra Buttigieg
- Teamwork and Patient Safety - Prof. Sandra Buttigieg
- The Relevance and Effectiveness of the Treatment Abroad Service Provided by the National Health System - Dr Miriam Dalmas

## **Human Communication Sciences and Disorders**

- Adaptation of the TORPAM Word and Nonword Recognition Tests for Five to Seven-Year-Old Maltese Children - Dr Rachael Agius
- Bilingual Receptive and Expressive Lexical Skills in Maltese School-Aged Children - Prof. Daniela Gatt
- Comparison of Current Speech-language Therapy Services in Malta with Global Trends - Prof. Helen Grech
- Developing an Acoustically-Annotated Corpus of Reading Accuracy Performance for Maltese and English Word Reading Assessment - Dr Rachael Agius
- Exploring the Role of AI in Reading and Writing Practices among University Students - Dr Rachael Agius
- Language Abilities in Maltese Children with DLD - Prof. Daniela Gatt
- Lexical and Narrative Skills in Maltese Bilingual Children - Prof. Daniela Gatt

- Sentence Recall and Nonword Repetition Tasks as Clinical Markers for Identification of Maltese Children with Developmental Language Disorder - Prof. Helen Grech
- The Adaptation of the Aphasia Impact Questionnaire (AIQ, Concise) to the Maltese Context - Dr Ritienne Grima
- The Adaptation of the TORPAM Phonological Awareness Tests to Five to Seven-Year-Old Maltese Children - Dr Rachael Agius
- The Role of Artificial Intelligence in Supporting Reading and Writing in Secondary Education - Dr Rachael Agius
- Validation of the MESA on Diverse Clinical Populations - Prof. Helen Grech

## **Midwifery**

- Antenatal Education - Dr Georgette Spiteri
- Childbirth Trauma - Dr Rita Pace Parascandalo
- Choice, Control and Continuity of Midwifery Care - Prof. Josephine Attard
- Compassion and Compassionate Care - Dr Rita Pace Parascandalo
- Domestic Abuse during the Perinatal Period - Dr Christie Hili
- Fertility, Infertility and Reproduction - Dr Georgette Spiteri
- Gender in Parenthood - Dr Georgette Spiteri
- Intensive Care of the Neonate - Dr Rita Pace Parascandalo
- Legal issues in Midwifery - Dr Rita Pace Parascandalo
- Maternal Health for Vulnerable Groups - Dr Christie Hili
- Midwives' Professional Quality of Life and Occupational Wellbeing - Dr Rita Pace Parascandalo
- Neonatal Resuscitation - Dr Rita Pace Parascandalo
- Newborn Care - Dr Rita Pace Parascandalo
- Nutritional Support for Women and their Offspring across the Perinatal Continuum - Dr Georgette Spiteri
- Perinatal Mental Wellbeing - Dr Rita Pace Parascandalo
- Perinatal Outcomes and Lived Experiences of Migrant Women - Dr Christie Hili
- Post-traumatic Stress Associated with Childbearing - Dr Nicole Borg Cunen
- Preparation for Parenthood from Preconception to the First Postnatal Year - Dr Georgette Spiteri
- Preterm Birth - Care of the Preterm Infant and the Family - Dr Rita Pace Parascandalo
- Reclaiming Physiological Birth: Supporting Normal Processes in Contemporary Maternity Care - Prof. Josephine Attard
- Research Ethics - Dr Rita Pace Parascandalo
- Social Aspects of Childbirth - Prof. Josephine Attard
- Social Determinants Involved in the Transition to Parenthood - Dr Georgette Spiteri
- Socio-cultural Aspects in Midwifery - Dr Christie Hili
- Spiritual Care and Compassion - Prof. Josephine Attard
- The Birth Environment - Dr Rita Pace Parascandalo
- The Tie to the Unborn Child in Expectant Mothers and Fathers - Dr Nicole Borg Cunen
- Women's Health - Dr Rita Pace Parascandalo

## Nursing

- Advanced Nursing Practice - Dr Corinne Scicluna
- Antimicrobial Resistance - Dr Ermira Tartari Bonnici
- Antimicrobial Stewardship - The Role of the Nurse/Competencies for Nurse Education - Approach) - Dr Ermira Tartari Bonnici
- Application of Ethical Theory in Practice - Dr Adrienne Grech
- Any, or a Combination of, Contemporary Challenges in the Nursing Workforce: Employee Burnout, Staff Retention, High Turnover, Shortage, Distress, Wellbeing - Dr Stephen Ebejer
- Catheter-Associated Urinary Tract Infections - Dr Ermira Tartari Bonnici
- Catheter-Related Bloodstream Infections (Peripheral/Central Catheters; Bundle Community Health Care - Dr Norma Josephine Delezio
- Continence Promotion - Dr Anthony Scerri
- Creativity and Innovation in Nursing and Healthcare - Dr Stephen Ebejer
- Creativity and Reflexivity in Nursing; The Social Aspect of Care - Dr Sharon Martinelli
- Critical Care Nursing - Prof. Josef Trapani
- Curriculum Development, Evaluation and Accreditation - Prof. Maria Cassar
- Dementia Care - Dr Anthony Scerri
- Diabetes Care - Prof. Roberta Sammut
- Diabetic Foot - Dr Corinne Scicluna
- Drug Administration - Dr Corinne Scicluna
- Emergency Nursing - Dr Trevor Abela Fiorentino
- Emerging Viral Infectious Diseases Outbreaks/Pandemics (COVID-19) - Dr Ermira Tartari Bonnici
- Emotional Intelligence/Emotional Competence in Nursing - Dr Roderick Bugeja
- Empowerment in Nursing - Dr Corinne Scicluna
- Ethical and Legal Issues/Challenges in Nursing - Dr Adrienne Grech
- Ethical Climates in Healthcare - Dr Adrienne Grech
- Evidence Based Nursing - Dr Roderick Bugeja
- Facilitating Assessment and Learning in Virtual Learning Environments - Dr Michelle Camilleri
- Genetic Nursing - Dr Daren Chircop
- Genito-Urinary Medicine/Nursing - Dr Roderick Bugeja
- Hand Hygiene/Electronic Automated Hand Hygiene Monitoring - Dr Ermira Tartari Bonnici
- Health Behaviour Modification/Health Promotion - Dr Roderick Bugeja
- Implementation of Evidence-based Medicine/Nursing in Daily Practice - Dr Anthony Scerri
- Informal Learning in Practice - Dr Michelle Camilleri
- Innovative Teaching and Learning Strategies in Cardiac Clinical Education - Dr Justin Lee Mifsud
- Leadership - Dr Corinne Scicluna
- Learning from Errors in a Variety of Clinical Contexts - Dr Stephen Ebejer

- Management of Care - Dr Corinne Scicluna
- Measurements and Outcomes in Cardiac Patients Pre- and Post-Interventions - Dr Justin Lee Mifsud
- Moral Resilience and Courage in Nursing - Dr Adrienne Grech
- Nurse Migration, Regulation and Registration - Prof. Maria Cassar
- Nursing Care of Older Persons in Formal Care Settings - Dr Anthony Scerri
- Nursing Ethics - Dr Adrienne Grech
- Online Teaching and Learning - Prof. Josef Trapani
- Organisational Safety Culture and Patient Safety - Dr Stephen Ebejer
- Perioperative Care and Operating Theatre Nursing - Dr Stephen Ebejer
- Politics in Nursing - Dr Corinne Scicluna
- Pre-Hospital Emergency Care - Dr Trevor Abela Fiorentino
- Prevention of Surgical Site Infections - Dr Ermira Tartari Bonnici
- Preventive Cardiology in At-Increased-Risk Populations - Dr Justin Lee Mifsud
- Professional Development - Dr Michelle Camilleri
- Public Health - Dr Norma Josephine Delezio
- Rehabilitation - Dr Anthony Scerri
- Reproductive Health - Dr Roderick Bugeja
- Respiratory Care Nursing - Dr Daren Chircop
- Resuscitation Education - Dr Trevor Abela Fiorentino
- Self-Management of Chronic Conditions - Prof. Roberta Sammut/  
Dr Norma Josephine Delezio
- Self-Management of Chronic Illnesses - Dr Norma Delizio
- Sex, Sexuality and Sexual Health/Behaviours - Dr Roderick Bugeja
- Sexuality and Relationships Education - Dr Roderick Bugeja
- Simulation Education - Dr Trevor Abela Fiorentino
- Skin and Wounds - Dr Corinne Scicluna
- Specialist Nursing - Dr Corinne Scicluna
- Ventilator-Associated Pneumonia - Dr Ermira Tartari Bonnici
- Virtual Reality/Artificial Intelligence in Nursing Education - Dr Roderick Bugeja

## **Occupational Therapy**

- Alzheimer's Disease and Related Dementias - Dr Marjorie Bonello
- Availability and Accessibility of Play and Communal Spaces - Dr Nathalie Buhagiar
- Children's Participation in Home, School and Community - Dr Nathalie Buhagiar
- Clinical Reasoning in Acute Physical Occupational Therapy Settings -  
Dr Rene Mifsud
- Ergonomics and Occupational Therapy - Dr Marjorie Bonello
- Evaluating School Based Occupation Therapy Services - Dr Nathalie Buhagiar
- Exploring Occupational Engagement and Balance in Children with and without  
Disability - Dr Nathalie Buhagiar
- Occupation-Based Resources and Technology - Dr Rene Mifsud
- Outcomes of Occupational Therapy Rehabilitation - Dr Rene Mifsud

- Parenting Children with Disability - Dr Nathalie Buhagiar
- Practice Based Education - Dr Marjorie Bonello
- Pre-school Children, Play and Practice - Dr Nathalie Buhagiar
- Strengths and Challenges in Engaging in Childhood Occupations - Children's Voices - Dr Nathalie Buhagiar
- Supported Community Living of Older Adults - Dr Rene Mifsud

### **Physiotherapy**

- Optimising Pulmonary Rehabilitation Outcomes - A Multidimensional Physiotherapy Approach - Dr Anabel Sciriha
- Physiotherapy in the Management of Pain - Dr John Xerri De Caro
- Prediction Models for Determinants in Aquatic-Based Sports - Dr John Xerri De Caro

### **Podiatry**

- Clinical Biomechanics - Prof. Alfred Gatt
- Diabetes Foot Screening - Prof. Cynthia Formosa
- Diabetic Foot Biomechanics - Prof. Alfred Gatt
- Diabetic Footwear - Dr Stephen Mizzi
- In Shoe Micro-Climate - Dr Stephen Mizzi
- Nail Surgery - Dr Anabelle Mizzi
- Orthotics and Prosthetics - Dr Jesmond Attard
- Peripheral Arterial Disease - Dr Anabelle Mizzi
- Podiatric Dermatology - Dr Stephen Mizzi
- Podiatric Sports Medicine - Prof. Alfred Gatt
- Podogeriatrics - Prof. Cynthia Formosa
- Podopaediatrics - Prof. Cynthia Formosa
- The Diabetic Foot - Prof. Cynthia Formosa
- Thermography - Prof. Alfred Gatt/Dr Stephen Mizzi
- Vascular Assessment of the Lower Limbs - Dr Anabelle Mizzi

### **Radiography**

- Advanced Practice in Radiotherapy - Dr Guilherme Couto
- Advanced Practice /Role Development/Role Extension in Radiography - Prof. Paul Bezzina, Dr Jonathan L Portelli/Prof. Francis Zarb
- AI in Medical Imaging and Radiotherapy - Dr Susan Mercieca/Dr Jonathan L. Portelli
- Applications of Digital Health Technologies to Improve Hospital Workflows and Treatment Outcomes - Dr Susan Mercieca/Dr Jonathan L Portelli
- Applications of mHealth Technologies in Radiotherapy - Dr Susan Mercieca
- Assessment of Maltese Patients' Perceptions of the Educational Requirements of Therapy Radiographers - Prof. Paul Bezzina
- Benefit-Risk Communication in Radiography - Dr Jonathan L. Portelli
- Cancer Survivorship - Dr Gerbert van Dijk

- Dose/Risk Optimisation - Prof. Francis Zarb/Prof. Paul Bezzina/  
Dr Jonathan L. Portelli
- Education of Radiotherapy - Dr Guilherme Couto
- Hybrid Imaging Involving Molecular Imaging Modalities - Dr Karen Borg Grima
- Image Quality - Prof. Francis Zarb
- Management of Uncertainties in Radiotherapy Planning - Dr Susan Mercieca
- MR Linac - Dr Susan Mercieca
- Nuclear Medicine Imaging - Dr Karen Borg Grima
- Optimisation of Liver Cancer Ablation Zone - Dr Susan Mercieca
- Paediatric Radiography - Dr Jonathan L. Portelli
- Patient Care/Patient Experience in Radiography - Prof. Paul Bezzina/  
Dr Jonathan L. Portelli/Dr Karen Borg Grima
- Patient Care/Patient Experience in Radiotherapy - Dr Gerbert van Dijk
- Quality of Life of Cancer Patients, Survivors and Carers - Dr Gerbert van Dijk
- Radiation Safety - Prof. Paul Bezzina/Dr Jonathan L. Portelli
- Radiobiology in Radiotherapy - Dr Guilherme Couto
- Radiography Research - Prof. Paul Bezzina/Prof. Francis Zarb
- Radiographers' Competencies and Education - Prof. Paul Bezzina/  
Dr Jonathan L. Portelli
- Radiopharmacy Science and Procedures - Dr Karen Borg Grima
- Sustainability in Radiotherapy/Radiography - Dr Guilherme Couto