UNIVERSITY
OF
JOHANNESBURG

Our Future
Reimagined

A Bachelor of Education Honours in STEM Education

The Faculty of Education at UJ is committed to knowledge-making for 21st-century education. To this end, the faculty offers a BACHELOR OF EDUCATION HONOURS IN STEM EDUCATION programme with four specialisation areas, namely:

- **Science Education** (H5SSSQ)
- **Technology Education** (H5SSTQ) (Not offered at the moment)
- **ICT Innovation in Education** (H5SSIQ)
- **Mathematics Education** (H5SSMQ)

These programmes are all at an NQF Level 8.

PURPOSE

The purpose of the BEd Hons (STEM Education) is to prepare students for research-based postgraduate studies in STEM education to consolidate and deepen their expertise in science and technology education, as well as their academic and practical competence in these specialisations within education. It also strives to develop education research capacity. This is done by developing in students the competence of a deep and systemic understanding of the current thinking, practice, theory, and methodology related to a specialisation in Mathematics, Science and Educational Technology. Students will develop the skills to design and implement research that is appropriate for the educational community.

ADMISSION REQUIREMENTS

To gain admission into the BEd Hons (STEM Education), a potential student should possess:

A four-year Bachelor of Education degree with Mathematics/Science/ Technology as a major.

OR

A general NQF level 7 first degree with Mathematics/Science/Technology as a major plus a 120 credits NQF level 7 Advanced Diploma in Education or PGCE.

OR

In the case of ICT Innovation in Education, a student should possess a general NQF level 7 first degree plus a 120 credits NQF level 7 Advanced Diploma in Education in any subject offered in the field of educational technology.

OR

A four-year professional teaching qualification(s) as well as an Advanced Diploma in a cognate sub-field of Education

ADDITIONAL ADMISSION REQUIREMENTS

An average of 65% for the previous degree is required to be allowed into the programme. Additionally, students should provide proof of relevant academic competence in the following subjects/modules:

Mathematics Education

- A minimum of 60% in Mathematics / Applied Mathematics/ Mathematical Literacy (or equivalent) at a second-year level to qualify for the Mathematics Education endorsement

Science Education

- A minimum of 60% in Chemistry / Physics/Applied Mathematics (or equivalent) at a second-year level to qualify for the Science Education endorsement (Physical Sciences)
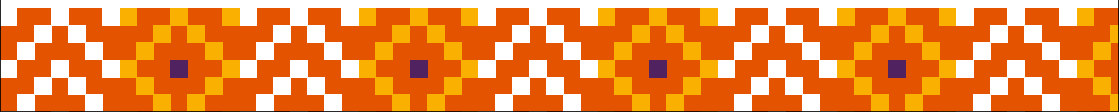
- A minimum of 60% in two of the following subjects:

  Zoology

  Botany

  Human Anatomy

  Human Physiology

  Molecular Biology (e.g., Biochemistry and Microbiology)

  Biotechnology

  or equivalent to qualify for the Science endorsement (Life Sciences

Technology Education

- A minimum of 60% in a Technology-related major at a second-year level to qualify for the Technology Education endorsement

ICT Innovation in Education

- A minimum of 60% for any one of the STEM-related subjects as mentioned above (Mathematics, Science or Technology Education) at a second-year level.
- A minimum of 60% in a relevant ICT-related subject within the previous degree/diploma at any level.

 In addition to the minimum admission requirements as outlined above. Prospective students who apply for this degree will undergo a selection process. The selection process may include personal interviews, panel interviews, and written submissions. It will take the following into account: previous academic achievement, personal skills, interpersonal skills, the ability to work in a team and the potential to develop the necessary skills to become an effective researcher.

OUTCOMES OF THIS PROGRAMME

Exit-level outcomes in the BEd Honours in STEM Education require that students demonstrate the following competencies:

- Engage with a broad spectrum of educational theories in the field of STEM Education.
- Identify and explore contentious issues in their selected specialisations.
- Conceptualise and articulate a theoretical lens to guide their research.
- Plan their research design.
- Align their research and practices with the ethical ethos of the faculty.
- Select appropriate methodologies being cognisant of the tenets in both quantitative and qualitative research.
- Design and/or select research instruments taking cognisance of elements of validity and trustworthiness.
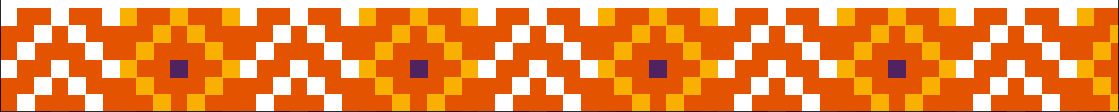
- Collect and manage a data set using appropriate technologies, e.g., file management, document version control, and cloud storage; use appropriate techniques to analyse data; and in support, use software packages, e.g. ATLAS.ti, TRANSANA, and SPSS and use reference managers to manage and share their sources, e.g. RefWorks, Mendeley, EndNote, and Zotero.
- Communicate their research findings in a research report taking cognisance of technical aspects.
- Join existing online research communities, share their research, and broaden their horizons as part of their own professional learning network.

PROGRAMME STRUCTURE

A. Minimum duration: One-year formal instruction.

B. The programme is offered full-time or part-time.

C. The programme consists of compulsory modules and includes a number of electives.

The following rules of combination apply to the four endorsements for the programme:

- If a student opts for an endorsement in Science Education, they will select the two generic/shared/integrative modules, namely *Education Theory* and *Research Methodology*, and the two specific elective modules *Current Issues in Science Education* and *Research Report in Science Education*.
- If a student opts for an endorsement in Technology Education, they will select the two generic/shared/integrative modules, namely *Education Theory* and *Research Methodology*, and the two specific elective modules, *Current Issues in Technology Education* and *Research Report in Technology Education*.
- If a student opts for an endorsement in ICT Innovation in Education, they will select the two generic/shared/integrative modules, namely *Education Theory* and *Research Methodology*, and the two specific elective modules *Current Issues in ICT Innovation in Education* and *Research Report in ICT Innovation in Education*.
- If a student opts for an endorsement in Mathematics Education, they will select the two generic/shared/integrative modules, namely *Education Theory* and *Research Methodology*, and the two specific elective modules *Current Issues in Mathematics Education* and *Research Report in Mathematics Education*.
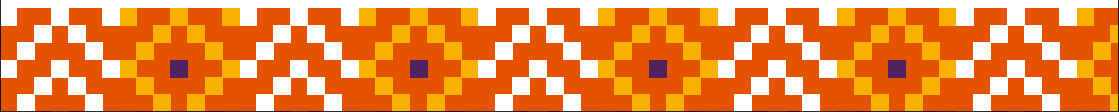
CURRICULUM

Curriculum summary – B Ed Honours in Science Education (H5SSSQ)			
All modules are compulsory			
First-year – Compulsory year modules			

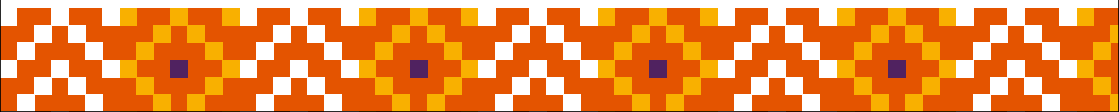| Module name	Module code	NQF level	Credits
Education Theory	HETSS0Y	8	30
Current Issues in Science Education	HCISE0Y	8	30
Second year – Compulsory year modules *(This module is to be completed in the first (1st) year if registered for full-time studies or in the second (2nd) year if registered for part-time studies)*			
Research Methodology	HRMSS0Y	8	30
Research project in Science Education	HRRSE0Y	8	30
Curriculum summary – B Ed Honours in Technology Education (H5SSTQ)			
All modules are compulsory			
First-year – Compulsory year modules			
Module name	**Module code**	**NQF level**	**Credits**
Education Theory	HETSS0Y	8	30
Current Issues in Technology Education	HCITE0Y	8	30
Second year – Compulsory year modules *(This module is to be completed in the first (1st) year if registered for full-time studies or in the second (2nd) year if registered for part-time studies)*			
Research Methodology	HRMSS0Y	8	30
Research project in Technology Education	HRRTE0Y	8	30
Curriculum summary – B Ed Honours in ICT Innovation in Education (H5SSIQ)			
All modules are compulsory			
First-year – Compulsory year modules			
Module name	**Module code**	**NQF level**	**Credits**
Education Theory	HETSS0Y	8	30
Current Issues in ICT Innovation in Education	HCIIT0Y	8	30

Second year – Compulsory year modules *(This module is to be completed in the first (1st) year if registered for full-time studies or in the second (2nd) year if registered for part-time studies)*			
Research Methodology	HRMSS0Y	8	30
Research project in ICT Innovation in Education	HRRIT0Y	8	30

Curriculum summary – B Ed Honours in Mathematics Education (H5SSMQ)			
All modules are compulsory			

First-year – Compulsory year modules			
Module name	**Module code**	**NQF level**	**Credits**
Education Theory	HETSS0Y	8	30
Current Issues in Mathematics Education	HCIME0Y	8	30

Second year – Compulsory year modules *(This module is to be completed in the first (1st) year if registered for full-time studies or in the second (2nd) year if registered for part-time studies)*			
Research Methodology	HRMSS0Y	8	30
Research project in Mathematics Education	HRRME0Y	8	30

ADDITIONAL INFORMATION

The qualification is offered on a full-time basis for over one year and on a part-time basis for over two years.

Prospective applicants who are employed are encouraged to apply for part-time studies. This is because the research-based focus time and workload associated with full-time studies may not accommodate the demands of full-time employment.

Note that classes will be offered in person weekly from 15:00-18:00 on Thursdays *(The day of the week may be adjusted)*. Class attendance is compulsory.

Students who opt for part-time studies do not qualify for UJ Honours bursary.

DISCLAIMER

Fulfilling all the minimum entry requirements does not guarantee acceptance into a particular programme. The faculty reserves the right to limit numbers in line with its enrolment targets.

The Faculty of Education also reserves the right to cancel an application or registration in the event that there are insufficient student enrolments to ensure the viability of the programme.
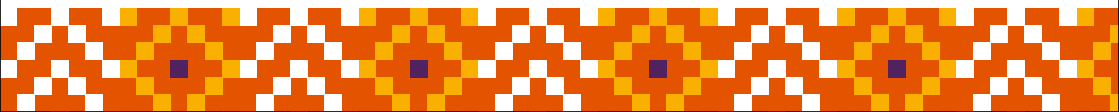
APPLICATION AND REGISTRATION INFORMATION

To submit your **application**, apply online using the following link **Apply@UJ**. The closing dates can be seen on the UJ website.

The due dates for **registration** are available at **Registrations@UJ**.

* Only accepted applicants are permitted to register.

CONTACT DETAILS

- **For academic-related matters** such as course content or class attendance, contact the programme coordinator, **Dr Viren Ramdhany** (**virenr@uj.ac.za**).
- **For administrative-related matters** such as application statuses, registration, or fees for all programmes:
  B Ed Honours in Science Education (H5SSSQ)
  B Ed Honours in Technology Education (H5SSTQ)
  B Ed Honours in ICT Innovation in Education (H5SSIQ)
  B Ed Honours in Mathematics Education (H5SSMQ)
  contact the **Faculty's Academic Administration Office**: **phone 011 559 3251 / 011 559 5562 or email eduqueries@uj.ac.za.**

www.uj.ac.za/edu