

# Agriculture @ Unisa

A complete guide to preparing  
yourself for career opportunities



**Define tomorrow.**

**UNISA** |   
university  
of south africa

# Contents

<b>How will this brochure help you?</b>	<b>3</b>
<b>What is agriculture?</b>	<b>4</b>
<b>Fields in Agricultural Science</b>	<b>4</b>
<b>Job titles related to Agriculture</b>	<b>5</b>
Further career information resources	6
<b>Skills and qualities needed in this career field</b>	<b>6</b>
<b>What are agricultural trends in South Africa?</b>	<b>7</b>
<b>Agricultural Digital Tools</b>	<b>7</b>
<b>Preparing for opportunities and planning your career</b>	<b>8</b>
<b>Identify opportunities with career research</b>	<b>11</b>
<b>Prepare for career opportunities</b>	<b>26</b>
Develop and reflect on your transferable skills	27
Start with a career portfolio	29
Work experience for agriculture students	29
My career learning plan	35
<b>Professional Registration</b>	<b>36</b>
<b>Qualifications</b>	<b>37</b>
<b>Frequently-asked questions</b>	<b>38</b>
I want to study at Unisa – where do I start?	38
I started studying at another higher education institution and I would like to complete my qualification through Unisa	38
I did not complete mathematics and/or physical science at the matric level – can I study agriculture at Unisa?	39
What if I do not qualify for admission to a degree?	39
What is the difference between an Advanced Diploma and a Postgraduate Diploma?	40
<b>Career development services at Unisa</b>	<b>41</b>

*The information in this document was correct as of 11 May 2023. Visit the Directorate: Counselling and Career Development website (<http://bit.ly/30yqrrl>) for the latest version of this document.*

## How will this brochure help you?

- It will provide you with some insight into the field of agriculture.
- It will help you gain more information on the qualities and skills needed in this career field.
- It will help you identify possible career opportunities related to agriculture.
- It will assist you in finding qualifications related to agriculture.

## What is agriculture?

**Agriculture** is a broad term that encompasses the many ways in which crops, plants, and domestic animals sustain the human population by providing food and other products. The word "agriculture" derives from the Latin words "ager" (field) and "colo" (cultivate) and includes activities such as cultivation, domestication, horticulture, arboriculture, and vegeculture. Livestock management methods such as mixed crop-livestock farming, pastoralism, and transhumance are also part of agriculture.

**Cultivation** is the process through which humans manage the lives and life cycles of certain plants by manipulating soil, water, and other components of the plant environment.

Domestication involves the human-associated domestication of livestock and non-human domesticators such as insects. This process has been crucial to the development of human culture and has allowed for the cultivation of plants and herding of animals.

**New and upcoming developments** in agriculture will have a big impact on the careers of people working in this field. One major area of progress is the increased use of technology and data to make farming more efficient and to grow more crops. Techniques like remote sensing, machine learning, and drones are being used to map soil and improve fertilisation and irrigation. Biotechnology and genetic engineering are also making crops more resistant to pests, diseases, and extreme weather. The rise of sustainable agriculture and organic farming practices is also expected to create new opportunities in the sector. With the growing demand for environmentally friendly products and sustainable production methods, careers in agroecology, permaculture, and regenerative agriculture are likely to become more prevalent.

## Fields in Agricultural Science

**Agronomy** is the study of crop production and soil management. Agronomists work in various settings, including agricultural companies, research institutions, and government agencies.

**Horticulture** is the study of plants used for food, medicine, and decoration. Horticulturists work in greenhouses, nurseries, landscape design firms, and public gardens.

**Agricultural Engineering** is the application of engineering principles and technology to agricultural production and processing. Agricultural engineers work in research institutions, equipment manufacturing companies, and government agencies.

**Agricultural Economics** is the study of the economic factors that affect agriculture, including the production, distribution, and consumption of agricultural goods and services. Agricultural economists work in universities, research institutions, and government agencies.

**Animal Science** is the study of livestock management and animal production. Animal scientists work in research institutions, agricultural companies, and government agencies.

**Food Science** is the study of the physical, chemical, and microbiological properties of food, and how they interact during processing and storage. Food scientists work in food processing companies, research institutions, and government agencies.

**Soil Science** is the study of the physical, chemical, and biological properties of soils. Soil scientists work in research institutions, environmental consulting firms, and government agencies.

**Agricultural Extension** is the application of scientific research and knowledge to agricultural practices, to help farmers improve their productivity and profitability. Agricultural extension workers typically work for government agencies or NGOs, providing education and technical assistance to farmers.

## Job titles related to Agriculture

Note that many of these job titles are in high demand in South Africa and are classified as green careers. Visit the [National Career Advice Portal](#) to read descriptions for these job titles.

- Agricultural economist
- Agricultural educator
- Agricultural engineer
- Agricultural journalist/ writer
- Agricultural lawyer
- Agrichemical spraying/dusting operator
- Agricultural/horticultural produce inspector
- Agricultural immunologist
- Agricultural laboratory technician
- Agricultural machine and equipment operator
- Agricultural mobile equipment operator
- Agricultural mobile plant (equipment)
- Agricultural product processing engineer
- Agricultural product processing engineering technologist
- Agricultural research technician
- Agricultural sample collector

- Agricultural sampling officer
- Agricultural scientist
- Agronomist
- Animal geneticist
- Animal scientist
- Bioresource engineer
- Crop consultant
- Entomologist
- Extension officer
- Farm manager
- Geographic Information Systems (GIS) technologist
- Horticulturalist
- Lecturer
- Livestock specialist
- Plant breeder
- Plant pathologist
- Precision agriculture technician
- Seed production technician
- Soil Scientist
- Teacher

## Further career information resources

- [Living Agriculture](#)
- [Environmental Sciences @ Unisa](#)
- [Life Sciences @ Unisa](#)
- [National Career Advice Portal](#)

Watch the Unisa Counselling and Career Development Agriculture and Environmental Sciences [online career event](#) for inspirational presentations about planning and managing your career related to the agriculture and environmental sciences.

## Skills and qualities needed in this career field

**Technical knowledge:** You need to understand scientific principles underlying agriculture, for example, biology, chemistry, physics, and mathematics.

**Problem-solving skills:** You need to be able to analyse complex data, identify patterns, and develop solutions to diverse and often complex problems.

**Communication skills:** You must be able to communicate technical information to a variety of people such as your customers, other farmers, financial institutions, and policymakers.

**Passion for agriculture:** You must be genuinely interested in agriculture and be committed to increasing sustainability and productivity.

**Collaborative skills:** You will work with other people from diverse educational, cultural and technical backgrounds.

**Attention to detail:** Careful attention to detail is essential in agricultural science, as small mistakes can have significant impacts on crop yields and other outcomes.

**Ethics and responsibility:** You must be committed to ethical and responsible practices, including environmental sustainability and animal welfare.

## What are agricultural trends in South Africa?

- **Institutional and policy shifts:** the aim is to create opportunities for entrepreneurial farmers and create a more efficient allocation of resources in agriculture.
- **Technology:** technological advancements have been identified to be a significant driver of agricultural growth.
- The use of **chemicals** such as synthetic fertilisers has contributed to the increase of productivity in the agricultural sector through the replenishment of nutrients in the soil.
- **Genetically modified crops:** Although contentious, genetically modified crops have contributed to the development of agriculture both in South Africa and beyond.
- **Machinery use:** The mechanisation of farms is beneficial to the agricultural sector because it reduces labour costs and improves production efficiency, as well as increases crop income.
- **Market changes:** South Africa's per capita consumption of meat, milk and eggs has been increasing over the years. In response to the change on the demand side, more inputs are directed to the production of livestock, vegetables, and fruits to keep up with the more diversified food demand, contributing to severe soil and water pollution from agricultural runoff and animal wastes.

## Agricultural Digital Tools

- [Agricultural Statistical Reports](#): price trends of beef cattle in South Africa and land prices
- [Agri-workers Survey and Census Tool](#): up-to-date information on Agri-workers in the Western Cape from all ages, gender, location and careers

- [Cape Farm Mapper](#): spatial information queries and decision-making in both the fields of agriculture and environment management
- [Carbon Footprint Calculator](#): calculate what your personal and professional carbon footprint is. It also gives you tips on how to do better
- [Enterprise Budgets](#): listings of all estimated gross income and expenses associated with a specific enterprise to provide an estimate of its gross margin
- [Finance for Farmers Tool](#)
- [Fruitlook.co.za](#): web-based, real-time data based on remote sensing data modelling for the Western Cape agricultural sector. The system is updated weekly with crop growth, moisture, and mineral data
- [Green Agri](#): one-stop portal for all farmers, researchers, and private and non-governmental agencies interested in smart agricultural practices (i.e., supporting green farming practices, balancing farming and conservation needs, resource efficiency and waste minimisation)
- [Smart-Agri](#): the vision here is to lead the way to a climate-resilient agricultural future for the Western Cape with a coordinated sector plan
- [Marketing and Agribusiness](#): Co-operative Development and Support, Market Analysis and Market Information
- [Smart-Tech](#): access surveys, an ostrich slaughter planner, and a canola camera (i.e., aerial view of yellow leaf coverage over an area)
- [Western Cape Dam Levels](#): know the current dam levels and the importance of water saving

## Preparing for opportunities and planning your career

“Don’t ask kids what they want to be when they grow up but what problems they want to solve. This changes the conversation from who do I want to work for, to what do I need to learn to be able to do that.”

*Jaime Casap, Google Global Education Evangelist*

One way of preparing for opportunities and planning your career is to think about the type of problems you would want to be able to solve. This will help you to focus on what you wish to contribute, and not necessarily on, whom you want to “become”. Once you have identified

some of the problems you would want to focus on, you can then explore how individuals from different academic and professional backgrounds are addressing these problems. Then, you could start thinking about how you would want to contribute and what you will need to do to prepare for this.

## Activity

Think about your environment (family, community, South Africa, Africa, international) and what problems or challenges you know about. Perhaps you have even thought of possible solutions to these challenges. Write down some of the problems or challenges you would want to address.

Problems/ Challenges

Next, think about how you would want to contribute to addressing some of these problems/ challenges. What would your role be? Also, think about how you would need to start preparing for the roles you identified (think about education, and work/ volunteer experience).

Problems/ Challenges	My role	How do I need to prepare

The following are some ideas of challenges/ problems experienced across the world, including South Africa.

Access to digital technologies	Disaster management	Nutrition
Access to education	Discrimination	Obesity
Access to employment	Economic growth	Peace
Access to mental health services	Economic inequality	Poverty
Access to primary health care	Economic inequality	Quality education
Affordable energy	Ethical institutions	Rapid urbanisation
Ageing world population	Fitness	Refugees
Cancer	Food security	Resistance to medicine (e.g. TB, malaria)
Child labour	Gender inequality	Responsible consumption
Clean air	Gender-based violence	Responsible production
Clean energy	Health and well-being	Retirement
Clean fuel	HIV/AIDS	Rural development
Clean water	Human rights	Safety at work
Climate	Human trafficking	Sealife
Climate change	Hunger	Sexual Health
Corruption	Illegal drugs	Skills development
Crime	Income inequality	Skills gap
Data security	Justice	Small enterprises
Deforestation	Knowledge transfer	Smoking
Digital disruption	Lifelong learning	Social cohesion
Digital economy	Literacy	Social inequality
Disabilities	Malnutrition	Substance addiction
	Meaningful employment	Sustainable agriculture
	Mechanisation	

Sustainable communities	Unemployment	Violence against children
Sustainable economic development	Urban development	Water security
	Violence	Youth unemployment

As an example, you may want to address the problem of unsustainable farming practices. Think about the different individuals that may be able to contribute to solving this problem: government workers, scientists, farmers, educators, engineers, and community development practitioners. As an agricultural scientist, you may research specific ways to practice sustainable agriculture; an engineer may develop innovative equipment; and an educator may teach other farmers how to farm sustainably.

*Complete the career research activities that follow to identify even more opportunities related to your studies.*

## Identify opportunities with career research

### How do you identify opportunities?

Your career research will connect you to others who will help you to answer questions you have with relation to your career choice; expand your understanding of the opportunities related to your career vision; identify “hidden” career paths that you did not think of previously and think about how you could plan to pursue specific opportunities.

### Prepare

Think about what you still need to find out: what questions do you have? You will use these questions as a starting point to structure your research. Examples of questions include “What can I do with a major in...”, “How much do agricultural scientists earn?” or “What must I study to be ...?”

### Keep track of information

Keep track of your research by making notes about what you learn and what you still need to find out.

## Evaluate

Evaluate the information that you are finding: Who wrote the information (person/organisation)? Which country does the information relate to? When was the information last updated? After you have visited several websites, you could reflect on what you found – what are the similarities and differences? What else do you need to find out?

## Ways to do career research

### 1 Online search

Use a search engine such as Google to search for information related to your questions. For example, you need to find out about career opportunities related to agriculture. You could start by using keywords such as “careers in agriculture”. To further contextualise your findings, you could search keywords such as “careers in agriculture Africa” and “careers in agriculture South Africa”. Scan the brief descriptions of the first ten results and decide which website you would want to explore first. Skim-read through the information on the website (start with the headings) to get an understanding of the content of the page and to find information related to your question. Also, check whether there are links to other websites

that you could further explore. As you are reading, make a summary of the information. You could use the information you find to make lists of job titles related to your field of study, organisations that employ individuals in these fields, and professional organisations.

Remember to bookmark pages that you would want to return to and make notes about what you find and what you would still like to find out. Use online services or apps such as Evernote (<http://www.evernote.com>), Diigo (<http://www.diigo.com>), or Notion (<https://www.notion.so/>) to keep track of your research online.

## Activity

Use Google to find specific job titles related to agriculture as a major. The following are some search terms you could consider: “job titles agriculture graduates”; “job titles agriculture graduates south africa”; “jobs for agriculture graduates with bachelor degree”. Note the job titles below.

Job title	Website
Agronomist	<a href="http://www.agcareers.com">www.agcareers.com</a>
Veterinary assistant	<a href="http://www.postmatric.co.za">www.postmatric.co.za</a>
Senior Researcher Soilborne Diseases	<a href="http://www.arc.agric.za">www.arc.agric.za</a>

## 2 Occupational information websites

The following websites will help you to learn more about specific job titles:

Website	Description
<b>Unisa Counselling &amp; Career Development</b> <a href="http://bit.ly/2TO2KoR">http://bit.ly/2TO2KoR</a>	This website provides more information about opportunities related to qualifications at Unisa.
<b>National Career Advice Portal</b> <a href="http://ncap.careerhelp.org.za/occupations">http://ncap.careerhelp.org.za/occupations</a>	Search for information about specific job titles.
<b>Career Planet</b> <a href="http://www.careerplanet.co.za/">http://www.careerplanet.co.za/</a>	Learn more about different career areas. The website also contains information about learnerships and student finance
<b>O*Net</b> <a href="http://www.onetonline.org/">http://www.onetonline.org/</a>	Explore job titles related to different categories such as your interests, skills, values, typical work activities, and more. You could also browse through groups of occupations related to specific industries or economic sectors.

<b>Prospects</b> <a href="http://www.prospects.ac.uk/">http://www.prospects.ac.uk/</a>	Explore different job titles related to job sectors, as well as what you could do with your major subject.
---	--

## Activity

Go to any of the above occupational information websites and search for the job titles you identified during the Google search activity.

Use the tables below to explore your top three occupational interests.

*Example table:*

Job title	Website	Related job titles?	Pros	Cons
<b>Agriculture Consultant</b>	NCAP	Agriculture Mentor Horticulture Consultant/ Advisor Landcare Officer	The tasks for this person seem related to my interests and values	Seems to be a lot of travelling involved

Job title #1	Website	Related job titles?	Pros	Cons

Job title #2	Website	Related job titles?	Pros	Cons

Job title #3	Website	Related job titles?	Pros	Cons

### 3 Job-search portals

Job search portals are useful in terms of researching specific job titles linked to different industries is job search portals. Finding job advertisements that interest you is a worthwhile activity, even if you are not currently applying for jobs. You may not yet be eligible to apply for your dream job, but you can still gain a lot of information that can be applied to your career planning. For example, you are interested in agriculture, but you are not

sure which specific job titles are linked to this field, or you want to know what kind of qualifications and skills are needed to be an agricultural scientist.

You can use this information to make career goals and think strategically about how you can develop experiences that will help you meet more of the selection criteria in the future.

Job search sites include

- PNet (<http://www.pnet.co.za>)
- Careerjunction (<http://www.careerjunction.co.za>)
- Careers24 (<http://www.careers24.com/>)
- Indeed (<http://www.indeed.co.za>)
- LinkedIn (<https://www.linkedin.com>)
- Government positions (<http://www.gov.za/aboutgovt/vacancies.htm>)

### Activity

Use the Indeed website (<http://www.indeed.co.za>) to search for job advertisements that mention the words “agriculture graduate” or “agriculture degree”. Write down the job titles that you find.

### Example list of job titles related to a bachelor's degree in agriculture

Regional manager (Agriculture)

Farm Manager

Copywriter (Agriculture)

Relationship manager (Agriculture)

Agriculture business manager

Evaluator (Agriculture)

Project officer (Sustainable land development)

Technical manager

### Your list of job titles related to a qualification in agriculture

## Activity

Use one of the websites above to search for “agriculture”. Read at least three advertisements and note the information in the tables below.

**Example (used indeed.co.za)**

Job title		Report writer
Salary	Not provided	
Organisation	International Union for Conservation of Nature	
Responsibilities/ duties/ tasks	<p>Manage all components of the project, its staff and project budget; Monitoring and Evaluation (M&amp;E) functions Oversight of The Environmental and Social Management Framework (ESMF); Ensure project compliance with all policies, regulations and procedures; Coordinate and oversee the preparation of the substantive and operational reports from the project; Foster and establish close linkages with relevant projects in South Africa, regionally and internationally</p>	
Requirements (qualifications)	Master's degree in Agricultural Production or Environmental Management	
Requirements (experience)	<p>At least 6 years of Project Management experience; Coordination and project leadership skills, and ability to multi-task; Community facilitation and skill in implementing expanded public works programme for stimulation of job creation; Demonstrated experience on institutional and policy matters and technical knowledge on aspects relating to Sustainable Land Management (SLM), climate change and community livelihoods projects; Technical knowledge on aspects relating to SLM (Soil, vegetation, climate and water resources); Ability to work and engage with government officials, private sectors, research institutes, non-governmental organizations (NGOs), and local communities, etc.; Availability for extensive domestic travel; Ability to work under high pressure.</p>	
Requirements (skills)	Management; Writing; E-literacy; Knowledge management; Analysis	

Job title #1	
Salary	
Organisation	

Responsibilities/ duties/ tasks	
Requirements (qualifications)	
Requirements (experience)	
Requirements (skills)	

Job title #2	
Salary	
Organisation	
Responsibilities/ duties/ tasks	
Requirements (qualifications)	
Requirements (experience)	
Requirements (skills)	

Job title #3	
Salary	
Organisation	
Responsibilities/ duties/ tasks	
Requirements (qualifications)	

Requirements (experience)	
Requirements (skills)	

#### 4 Agricultural career websites/ web pages

Many specific agricultural career websites can help you to identify job titles related to different areas in agriculture. Examples of these pages include:

- [AgriCareers](#)
- [Careers in Agriculture \(AgriSETA\)](#)
- [Agribook.digital](#)
- [AGCareers.com](#)
- [Careers in Agriculture and Food](#)

#### Activity

After visiting the above sites and reading through the information, write down the job titles mentioned on these sites in the table below.

Job titles related to a degree in agriculture

#### 5 LinkedIn

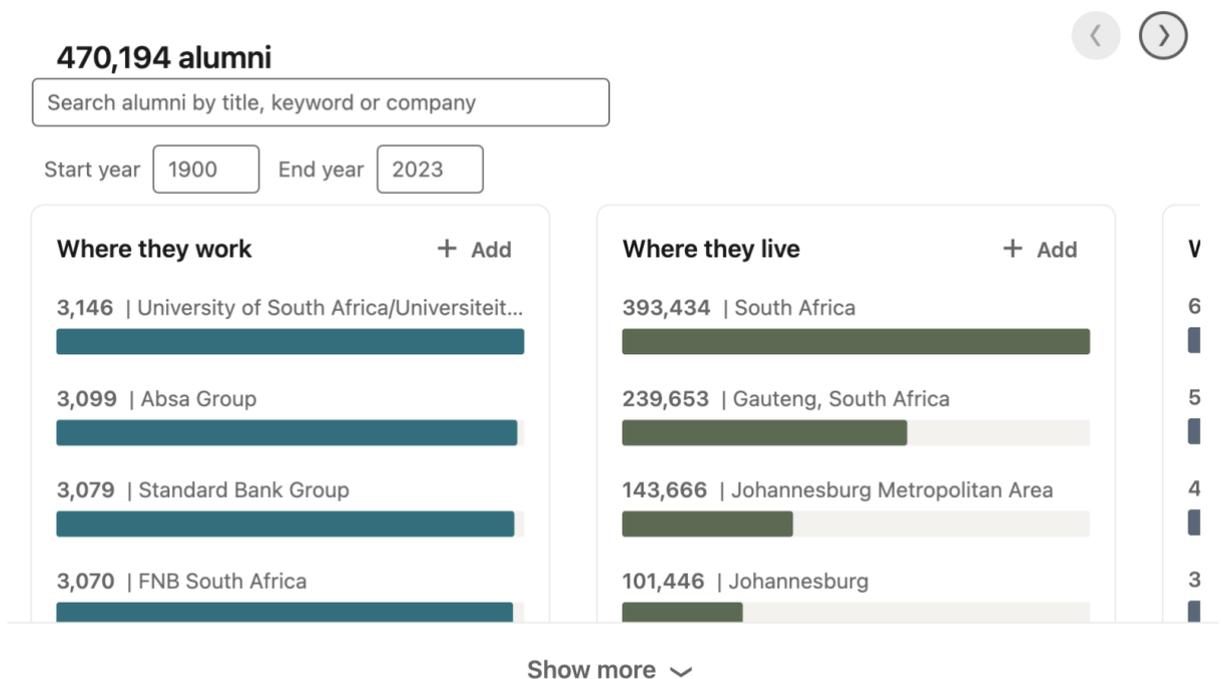
If you have not done so already, start building your network on LinkedIn (<http://www.linkedin.com>) today!

Register for a free account and start connecting with your network online. Join groups relevant to your career field so that you could participate in discussions, ask questions, provide answers about specific topics, and search for people, organisations, and jobs in your

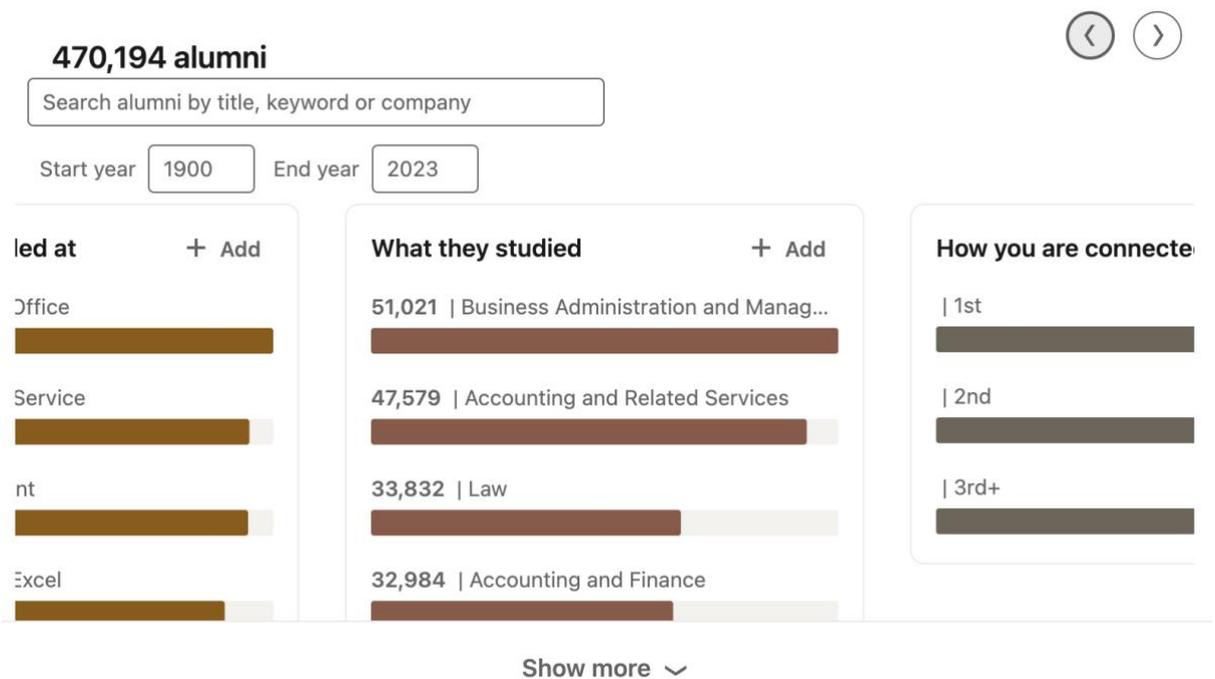
field of interest. Research companies and employees to help you identify opportunities. To learn more about using LinkedIn effectively, go to <http://bit.ly/2JSxa3b>.

## Activity

1. Go to [www.linkedin.com](http://www.linkedin.com) and sign in to your LinkedIn account. If you do not have an account yet, then create one.
2. Make sure that you have captured your current or previous studies at Unisa on your LinkedIn profile.
3. Once you are signed in, go to the University of South Africa page at <https://www.linkedin.com/school/12049/>.
4. Click on “Alumni”.
5. You will now be presented with a page with Headings and graphs beneath the headings (Where they live, Where they work).

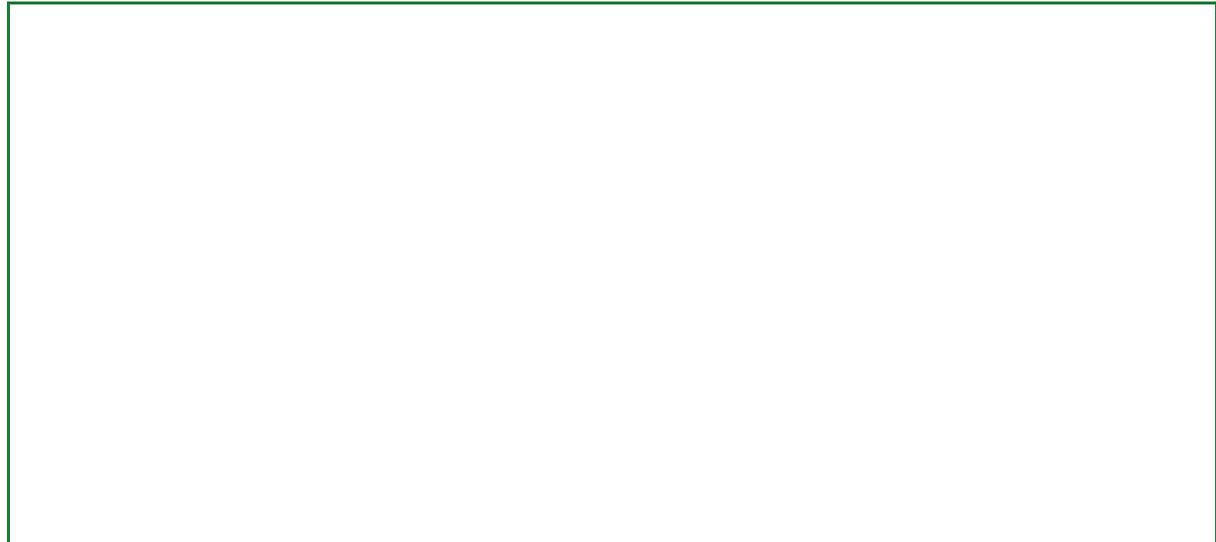


6. Click on the “Next >” link to go to the next set of headings (What they studied).



7. Click on “+Add” next to the heading “What they studied”
8. Start to type “agriculture” in the search box. You will notice that you are provided with suggestions for study fields.
9. Choose one of those options that you would want to explore.
10. You will notice that the graphs for the different headings adjust. You have now filtered the information to contain information about Unisa graduates for a specific field of study.
11. You can now see how many graduates in these fields are on LinkedIn, where they work, what they do, what they’re skilled at, etc.
12. You are also able to view the profiles of alumni who meet the criteria you searched for. For example, you can filter your search results to those alumni who indicated that they studied agriculture, and work at Unisa.
13. Make some notes about the interesting things you find below.

Your notes about what you find on LinkedIn



## 6 Talk to others (informational interviewing)

Once you have done some research about specific options, your next step is to talk to individuals in the type of job/ industry that you are interested in. The goal of these conversations is to explore your career options, expand your network, build confidence, access information, and identify your strengths and areas of development. For example, you read an article about a new farming method and you feel curious about how the researchers went about evaluating the programme. You could contact one of the authors of the article to ask if they would be willing to share how they went about gaining access to the information they needed for their evaluation. Before you interview someone, research what you would want to discuss with them – you could ask this person to “fill in the gaps” for you. Start with people you already know: friends, family, neighbours,

colleagues, lecturers, tutors, and fellow students. Use online social networks such as LinkedIn to identify potential individuals. For more information on how to go about this, and suggestions for questions that you might want to ask, visit <http://bit.ly/2LX7qp3>. Also, watch this video to learn more: The Dos and Don'ts of Informational Interviews: <http://youtu.be/ixbhtm8l0sl>.

Keep track of:

- the information you have gathered,
- how you make sense of the information,
- questions you still have, and
- ways you think you will be able to get answers to these questions.

**A Unisa student, Ms Nomalanga Mnisi, shares her experience of conducting informational interviews:**

**How did you prepare for the interviews?**

I started by reflecting on my career vision, as well as making notes of how I think my vision is related to the organisation I will contact for interviews, as well as the possible career fields within the company that is related to my studies and career vision.

I researched to help me understand more about the organisation, for example, the different divisions, where they are, what their main business is, and the kind of jobs available. This helped me to know which questions I need to ask so that I could clarify uncertainties.

I also wrote an introduction letter (who I am, previous and current qualifications, why I am interested or what I know about the organisation, the purpose of the information interview, and how it will contribute to my career development and also careers that I am interested in within the organisation).

I made a list of aspects I am curious about, including in which department is my qualification in demand within the organisation, and which career positions I can be considered for with my qualifications.; different career titles within the company related to my studies?; other requirements for those positions, e.g. skills, driver's license, physical health, etc.; how to structure my CV and cover letter; what to include when I apply for positions in the organisation?; information about internships, learnerships, or volunteering programmes that I can apply for to enhance my skills.

**What did you do before the interview?**

I sent an email confirming my appointment with keywords that I wanted the interview to cover and specified that among others those are topics I wanted to discuss with them. Both gave me feedback that my email also helped them to prepare for the interview.

## What did you gain from the interviews?

The two individuals I spoke to helped me to understand what I needed to ask during my next interviews in specific sections.

### Activity

Write down the names of people you know who may work in the fields you are interested in. For instance, do any of your parents' friends work in any of the fields you are considering? Also, write down the names of other people who you think could give you information about any careers you are considering.

People who work in my preferred career	People who can give me information about potential career choices
Brother's friend	University tutor

You may have identified a lot more people than you thought! Imagine how much information you can gather about the career you are interested in just by talking to these people. Each person will give you fresh insights opinions and valuable information about the careers you are considering, whether they are currently working in that field, or are only remotely related to or associated with it.

## 7 Attend a Virtual Grad Expo/ Careers Fair event

Attending a Careers Fair event allows you the opportunity to speak to people from different industries. You may be studying a qualification that does not seem to have a direct link to the exhibitors or the presenters, but they have one thing in common: they employ people, who work in organisations, that do business with all kinds of suppliers and services. Somewhere in this value chain, your qualification will find a place to fit – either as a customer or as an employer or employee.

### Preparation

- If in person, think about what you will wear.
- Practice your introduction - how will you introduce yourself to recruiters?
- Update your CV and LinkedIn profile and prepare to answer questions about yourself, your career, and your studies.
- Research the participating organisations (start with the organisation's website).
- Prepare questions that you would want to ask recruiters - use your research about an organisation to inform your questions (for example, "What kind of person are you seeking for this position?", and "What particular skills do you value most?").

### During

- Try to speak to all the exhibitors and presenters and keep a note of who they are and what their companies do – remember to introduce yourself.
- Speak clearly and confidently – it may be noisy, so remember to speak up if necessary.
- Be ready to take notes: Carry a notebook and pen with you, or do it on your cell phone/ tablet.
- Network with other students at the event (but not at the expense of talking to employers!)
- Don't ask about: Information you could have easily learned on the employer's website or salary and benefits.

### After

- Make notes about the various people you spoke to and the information you would want to follow up on.

- Connect with company representatives that you met online (for example, on LinkedIn)
- Reflect on your experience: How did you use this opportunity? Could you link your skills and qualification to what was offered at the Fair?

[Visit our website](#) for more information.

## 8 Experience studying agriculture

Explore what agriculture is by watching and listening to online lectures and reading free open textbooks on a variety of topics related to agriculture. These resources will enhance your understanding of agriculture and the various opportunities related to this field.

Search for courses and open textbooks on these sites:

- Open University (Visit the site at <https://www.open.edu/openlearn/>)
- Coursera.org (<http://www.coursera.org/>)
- Udemy (<http://www.udemy.com/>)
- Saylor Academy (<http://www.saylor.org/books/>)
- MITOpenCourseware (<https://ocw.mit.edu/>)
- Open Culture (<http://www.openculture.com/freeonlinecourses>)
- iTunes University (<http://www.apple.com/education/itunes-u/>)
- YouTube education (<http://www.youtube.com/education?b=400>)
- FreeVideoLectures (<https://freevideolectures.com/>)

**Watch the Unisa College of Agriculture and Environmental Sciences [orientation videos](#) to understand more about studying at Unisa.**

## Prepare for career opportunities

Many people believe that a degree will lead directly to a career specifically related to the major(s)/ specialisations for that degree. The fact is that degrees do lead to careers, but the relationship between the major(s)/ specialisation you choose and the career you build for yourself is complex. Many graduates follow careers that are seemingly not related to their

chosen major(s)/ specialisations. Various career management techniques will assist you in managing your career in:

1. Develop and reflect on your transferable skills
2. Start with a career portfolio
3. Volunteer work
4. Enhance your employability

## Develop and reflect on your transferable skills

Your degree will equip you with subject-specific knowledge and several work-related skills (transferable skills), for example, the ability to learn fast in new situations, to work independently, and to analyse, evaluate and interpret data. You should be able to identify and articulate the skills that you feel you are gaining through your studies. While you are busy with your studies, you need to reflect continuously on how you could apply the skills that you are learning to contribute to your professional development and who will be able to benefit from what you already know.

## Some important skills

### **Project management**

Planning

Resource management

Budgeting

Reporting

### **Life-long learning skills**

Willingness to learn

Information management

Access information

Interest in ideas

Curiosity

Desire to learn

### **Communication skills**

Reading

Writing

Presenting

Negotiating

Facilitating

Report-writing

Team collaboration

Networking

Multicultural awareness

### **IT and data skills**

Spreadsheets

Word processing

Internet

Databases

Presentations

Web tools

Analysing and presenting complex data sets

**Social responsibility**

Sustainability

Environmental responsibility

Ethical awareness

Community involvement

**Research**

Networking

Data mining

Knowledge management

Data collection

Critical evaluation

Data analysis

**Problem-solving and reasoning skills**

**Interpersonal skills: appreciating diversity**

**Sources**

Griesel, H., & Parker, B. (2009). Graduate attributes: A baseline study on South African graduates from the perspective of employers. Higher Education South African & The South African Qualifications Authority: Pretoria.

HE Academy. Student Employability profiles. Available: [https://www.heacademy.ac.uk/sites/default/files/student\\_employability\\_profiles\\_apr07.pdf](https://www.heacademy.ac.uk/sites/default/files/student_employability_profiles_apr07.pdf)

Reardon, R. C., Lenz, J. G., Sampson, J. P., & Peterson, G. W. (2009). Career Development and Planning: A comprehensive approach (3rd ed.). Ohio, USA: Cengage Learning.

**Skills reflection**

Module passed in the last semester	Skills developed	How can I use the skills to add value to an organisation, or help them solve specific problems?

Module passed in the last semester	Skills developed	How can I use the skills to add value to an organisation, or help them solve specific problems?

## Start with a career portfolio

Your career management portfolio could help you keep track of the information that you need to gather to manage your career. It could include information about yourself, job opportunities, occupational information, and the different fields in agriculture. Learn more about compiling a career portfolio here: <http://bit.ly/2WaPes7>.

## Work experience for agriculture students

### Volunteer work

As a volunteer, your studies in agriculture will come alive and you will be enriched and in a position to build up an important network of people who could comment on your professional abilities. You may be wondering how volunteering is related to your studies and your career. We would encourage responsible volunteering where the organisation and community that you are supporting benefit. You also have the

opportunity to apply and further develop your skills and knowledge as a student to support the community. Your volunteer work links to your career vision and planning: before you volunteer, think about where you would want to invest your effort.

Volunteering will help you to:

- figure out whether a specific field of work is for you or not;
- find out information about a specific field;
- connect with others and maintain relationships;
- network with others in your field of interest.

Some questions to think about:

- Which organisations or communities would benefit from my skills and knowledge?
- How would this organisation or community contribute to my career vision?
- What conduct is expected of a professional in this organisation and my future career?
- What are you hoping to gain from your volunteer activities?

Your volunteer work could lead to other opportunities, so it is important to treat it professionally: keep to your commitment, communicate when you cannot volunteer, and update your portfolio with examples of what you have learned and achieved. As a volunteer, you are already working as a professional – you need to conduct yourself as you would conduct yourself in a work environment. As you are volunteering, you are building your reputation (your “brand”): You would not

want to build a reputation as an exploiter or as an unreliable worker.

Your volunteer environment will help you to develop what is valued in professional environments. This includes punctuality, problem-solving, and effective communication. In this sense, volunteering contributes to your development as a unique graduate: one who has subject-specific knowledge and an understanding of professional workplace behaviour. The one thing to remember about volunteering is that your conduct needs to be accountable and ethical. Consider that you are contributing to the community and at the same time you are building your skill sets for the workplace – you need to balance self-interest with that which may benefit others. Your work within the community must be done with the utmost respect.

Identify volunteer opportunities in your area through conversations with members of your community. Also, search for organisations online. Make a list of the organisations that you would want to contact about exploring volunteer opportunities:

Check which volunteer organisations are active in your community. The Department of Social Development has a complete list of non-profit organisations in each

province available on their website at <http://www.npo.gov.za/PublicNpo/Npo>.

Unisa's Directorate: Counselling and Career Development runs a Student Mentor Programme that provides senior

Unisa students with an opportunity to be mentored in terms of their graduateness skills. In turn, students are empowered to provide support to others. Visit the website at <http://bit.ly/2MQBnpE> for more information.

## Activity

Identify volunteer work activities.

**Make a list of the organisations that you would want to contact about exploring volunteer opportunities.**

**What are you hoping to gain from your volunteer experience?**

**What can you contribute to an organisation?**

## Enhance your employability

Your employability refers to your ability to gain initial employment, maintain employment, and obtain new employment if required. In simple terms, employability

is about being capable of getting and keeping fulfilling work. There are many aspects related to maximising your employability, including managing your

personal brand, job-searching skills, networking, writing a CV, writing a cover letter, including networking, CV-writing, cover letter writing, and how to manage job interviews.

## Why is your employability important?

Today's careers are not what they used to be: Lifetime employment is a thing of the past: It is not unusual for an individual to hold about six different occupations during their careers, each with several jobs. The reasons for this are technological

advances, globalisation, economic shifts, and changing social norms. Careers are boundaryless: your career can cut across different industries and companies.

Instead of seeing your career as a ladder, you can view it as a web. Career success is defined in many different ways: The big house and fancy car are not the only measures of success. Some people choose to follow a more balanced lifestyle with more time to spend with their family. Where, when, and for whom you work are not necessarily fixed: Flexible work hours, working from home, part-time, temporary and contract work are all part of today's world of work.

*Source: Greenberg, J. & Baron, A. Behaviour in Organisations. 8th edition. Pearson Education Inc: New Jersey.*

## How can you develop your employability skills?

- Work through the information and activities on the *Prepare for job opportunities* section of the Directorate: Counselling and Career Development website (<http://bit.ly/2ufeSA6>).
- *The Muse* career website (<https://www.themuse.com/advice>) provides career advice related to your career questions.
- The Monster website (<http://www.monster.co.uk/>) provides several articles related to employability issues. Click on "Career Resources" and "Browse Career Advice" (at the top of the page) to access career-related information.

## Self-confidence

Your personal experiences (for example, your relationships with your parents and siblings; how you related to peers, and how you compare yourself to others) shape your self-confidence. Low self-confidence in all areas of your life, mainly how you negotiate relationships, your career, and your studies.

How much you believe in yourself or you do not believe in yourself affects your success in your career and studies. Low self-confidence affects your career and your studies in several ways:

- Your confidence determines your effort and determination in terms of your studies and your career. For example, if you do not believe that you can pass a particular module, you also do not spend time studying, since when you start studying you feel like “What is the use – I will fail in any case”.
- If you keep on telling yourself that, you are not capable of completing your qualification because you have low self-confidence, challenges in your studies act as confirmation that you are a failure. You will then also not go out and get help since you do not think that it will make a difference – you are not hopeful that this could change how you perform.
- Even when you experience challenges that are normal for all students to experience, you tell yourself it is a confirmation that you cannot make it.
- You spend disproportional amounts of time and energy gathering evidence or reinforcing your belief that you cannot make it so that it becomes a reality.
- When you do things well or when you get positive results you deny them. You find it hard to accept that positive things can happen in your life and you find external factors that have contributed to the results or success.
- You will make statements such as “Maybe I was just lucky this time – the other candidates did not accept the offer due to a low salary offer” or “Maybe the lecturer felt sorry for me.”
- When you are presented with an opportunity, you will not use it since you are concerned about failing.
- You project a negative attitude towards yourself and others. You find it hard to appreciate the

strengths of others and you are critical of others.

- You will not take risks to advance in your career because you think you will not make it. For example, you will not apply for an internship because you decide that you will not be selected even though you meet all the requirements.
- You are always concerned about how other people negatively think about you- you will not go and talk to the lecturer or ask other people because you think they will think you are stupid.

On the other hand when you have a healthy self-image:

- You accept yourself for who you are, and you acknowledge that there are things you do well and things you do not do well.
- You use your strengths in one area to build your self-confidence in other areas.
- You acknowledge things people appreciate about you since you

use these as a reaffirmation to develop areas where you feel you have room for growth.

- You believe you can achieve your desired career goals and you put your energy and resources toward your vision. This affects your studies in that you can talk to others about your study-related challenges, and you are proactive in terms of managing your studies since you know why you are studying.
- You can recognise and use presenting opportunities since you believe you can contribute.
- You can help others understand your potential and you appreciate how others could contribute to your development.
- You are more able to deal effectively with feedback on your performance since you can integrate the feedback with your self-knowledge.

## How do I build healthy self-confidence?

Building self-confidence is a process – it is like building a house: Building your confidence starts with small, practical

actions. As you get feedback about your actions, you take some positive things out of it about yourself and appreciate the

things you can do well and those you have to develop.

Spend some time each day writing down things you did yesterday that you can be proud of and things you would want to do differently.

Give yourself time to develop – a house cannot be built in a day.

Most importantly, it must not be about thinking about things, but about doing things. This will not always be easy, but you need to take risks and test what you can do and also see the results of your actions. For example, if you want information about your career, take a risk and e-mail your lecturer with questions to see what the response is. As you take risks, you need to change your attitude about how you view challenges and yourself. You will start thinking differently about challenges: that they are not meant to prove you as a failure, but rather to learn and discover new things about yourself.

You need to be able to embrace failure as part of the process to succeed. Your

failures do not define you as a person: Even when you fail, you do not internalise the experience that you are a failure. You learn from the experience, and you try again.

We want you to keep in mind your three circles (career, studies, and personal life) and make sure that you use one of the circles where you have more positive experiences to influence the other areas. For example, in your studies, you are getting good results and you are capable. However, you feel demotivated every time you think about your family situation.

Think about how the fact that you are succeeding with your studies could affect your career. Could it make you hopeful that you will be able to find a good job and then change your family's situation in the future? Thinking more about the things you can control (for example, your studies and how this will affect your career), enables you to minimise the sense of helplessness in terms of your family situation. When you focus on the things you can control, you create a positive outlook on yourself, your life, and others.

## My career learning plan

Your career learning plan will help you stay focused on what you still need to do to learn more about your career development. The career learning plan focuses on the following questions: What is the information you still need? How will you get this information and by when?

Further information needed	Steps to get this information	When?
<i>Where do agricultural scientists work in SA?</i>	Start with Google search	14 April
	Talk to a lecturer about referring me to someone who works in this field	15 April

## Professional Registration

Many professional bodies offer student registration categories to enable those who are still studying towards a qualification in the field, to join and receive specific benefits such as training, development and networking opportunities. The professional bodies' websites are also valuable sources of information should you wish to do research related to specific occupations. Many professional websites also list practitioners or organisations in the field and allow you to identify individuals whom you could contact for further conversations about your career.

1. [The Agricultural Economics Association of South Africa \(AEASA\)](#)
2. [South African Veterinary Council \(SAVC\)](#)
3. [AgriSETA](#)

# Qualifications

## Higher Certificates

Higher Certificate in Life and Environmental Sciences (98366)

Higher Certificate in Physical Sciences (90101)

Higher Certificate in Animal Welfare (90098)

## Diplomas

Diploma in Agricultural Management (90097)

Diploma in Animal Health (98026 – AHE)

## Advanced Diploma

Advanced Diploma in Agricultural Management (98027)

Advanced Diploma in Animal Health (90112)

## Bachelor's Degree

Bachelor of Science (9881 – GEN)

Bachelor of Science in Agricultural Science Agricultural Business and Management (90082-ABM)

Bachelor of Science in Agricultural Science Animal Science (90082-ANS)

Bachelor of Science in Agricultural Science Plant Science (90082-PLS)

## Postgraduate Diplomas

Postgraduate Diploma in Agriculture Agri-Business (90159-ABM)

Postgraduate Diploma in Agriculture Animal Health (90159-AHE)

Postgraduate Diploma in Agriculture Animal Science (90159-ANS)

Postgraduate Diploma in Agriculture Plant Science (90159-PLS)

## Master's Degree

Master of Science in Agriculture (98003)

## Doctoral Degrees

Doctor of Philosophy in Agriculture (90018)

## Short Learning Programmes (SLPs)

Unisa offers several [short learning programmes](#) related to agriculture and environmental sciences.

## Frequently-asked questions

### I want to study at Unisa – where do I start?

The first step to studying at Unisa is to apply for admission. Information about applying is available on the [Unisa website](#). Before you apply, take some time to read through the information about studying through an open distance learning institution by making an effective career choice, the requirements for your qualification(s), and the application process (Step1-5 on the application website. Information about applications for the following will normally be available at the beginning of August of the previous year.

### I started studying at another higher education institution and I would like to complete my qualification through Unisa

The first step is to apply for admission to your chosen qualification at Unisa. Once you have been accepted and registered for the qualification, you can [apply to be exempted](#) from specific modules in your degree based on your previous studies.

## **I did not complete mathematics and/or physical science at the matric level – can I study agriculture at Unisa?**

You can apply for admission to the Higher Certificate (HC) in Life and Environmental Sciences. Completion of this Higher Certificate could enable you to meet the minimum admission requirements for the Diploma in Agricultural Management. Admission is dependent on spaces for enrolment.

## **What if I do not qualify for admission to a degree?**

If you are concerned about being admitted to a degree in the College of Agriculture and Environmental Sciences, you are encouraged to apply for a lower-level qualification (Higher Certificate) offered in the College of Agriculture and Environmental Sciences in addition to the qualification you wish to do. If you are admitted to the Higher Certificate and you complete it, it will enable you to meet the requirements for a degree. You need to apply for admission to the degree during your last semester of study for the Higher Certificate. [This document](#) outlines the relevant higher certificates for the degrees and Diploma. The next step is then to apply for admission. Information about applying is available on the Unisa website at <https://www.unisa.ac.za/sites/corporate/default/Apply-for-admission> . Before you apply, take some time to read through the information about studying through open distance learning, making an effective career choice, the requirements for your qualification(s) and the application process.

Once you have applied, your application will be processed, and you will receive feedback as to the outcome of your application. Based on the new selection process, you will not be automatically accepted to study through Unisa, even if you meet the general academic admission requirements for a qualification. Unisa will assess your application using a points score system. You may then be offered a place based on your points score and the number of places available for your chosen qualification(s). You are welcome to let us know should you need to have a further discussion about your career and study planning before you apply.

## **What is the difference between an Advanced Diploma and a Postgraduate Diploma?**

The Advanced Diploma is primarily professional, vocational or career specific which is at NQF level 7. A Postgraduate Diploma is a qualification at NQF level 8 and would be suitable if you are considering continuing with further studies at the Master's and PhD levels.

## Career development services at Unisa

The Unisa Directorate: Counselling and Career Development offer career-, academic- and personal counselling services to Unisa students and the broader community. You can talk to a counsellor about:

- **Career decisions.** I am not sure which career path to follow; I don't know which qualification would be best; I want to change my career direction...
- **Career information.** How can I find out more about a career in ...
- **Employability.** How do I market myself to employers? How can I look for work? How can I compile an effective CV? How do I go about networking with others? How do I put together my career portfolio? How can I meet potential employers? How can I improve my interview skills?)
- **My studies at Unisa.** How can I get started with my studies? How do I plan my studies? How can I study more effectively? I don't feel motivated to continue with my studies... I feel worried about preparing for/ writing the exams. I failed my exams – what now? I need to improve my reading/ writing/ numeracy skills
- **Personal issues.** How can I have better relationships with others? How can I cope more effectively with issues that affect my studies?

Visit our website at <http://www.unisa.ac.za/counselling> to access many self-help resources, or talk to a counsellor by e-mail to [counselling@unisa.ac.za](mailto:counselling@unisa.ac.za).