



TERTIARY EDUCATION COMMISSION

**List of Indicative Priority
Fields of Study 2014/15**

March 2014

Introduction

The availability of a critical mass of professionals in relevant disciplines at all times, in support of existing as well as emerging economic sectors, is pertinent for ensuring the smooth and sustained growth and development of the Mauritian economy. In this perspective, effective human resource planning is deemed critical to ascertain that the output of the tertiary education sector matches the needs of employers and that of the economy.

The List of Indicative Priority Fields of Study (LIPFS) is an outcome of human resource planning. It has been prepared taking into account the priority needs of the country for high-level human resources by assessing employers' demand for graduates by discipline as well as the evolution of the labour market with regard to the potential supply of graduates in the short to medium term; the objective being to minimise mismatch in the economy by ensuring that the demand for and the supply of graduates are well balanced.

The LIPFS, accordingly, acts as a guide to prospective higher education students in their choice of fields of study. It is intended to assist them to make informed decisions so that after their graduation they hold reasonably good prospect for employment in fields in which they have been trained, in line with the priority needs of the country.

The LIPFS is also used as a reference document for the award of scholarships as well as for the introduction of new programmes and capacity building at the tertiary level.

The local labour market for graduates being very small and dynamic, the risk of high level human resource needs in any one field changing from scarcity to oversupply within a short time span is real. Users of the LIPFS are, accordingly, invited to exert caution and to consult the appropriate authorities conversant with latest labour market developments, prior to taking any decision concerning their final choice of study.

The LIPFS follows the International Standard Classification of Education adopted by the United Nations Educational, Scientific and Cultural Organisations for classifying fields of study. The fields of study are thus presented in alphabetical order for ease of reference and, as such, do not reflect any priority order.

The attention of users is further drawn to the fact that the LIPFS is indicative of the current state and likely future trends of the graduate labour market. The possibility though for immediate employment after graduation cannot be guaranteed by Government.

**Tertiary Education Commission
March, 2014**

Methodology

The preparation of the LIPFS 2014/2015 has been overseen by a Working Group chaired by the Permanent Secretary, Ministry of Tertiary Education, Science, Research and Technology and composed of representatives from public and private sectors' organizations, as follows:

Public Sector

- i. Ministry of Tertiary Education, Science, Research and Technology
- ii. Ministry of Education and Human Resources
- iii. Tertiary Education Commission
- iv. Human Resource Development Council
- v. Ministry of Labour, Industrial Relations & Employment
- vi. Ministry of Health and Quality of Life
- vii. Statistics Mauritius

Private Sector

- i. Joint Economic Council
- ii. Mauritius Chamber of Commerce & Industry
- iii. Mauritius Employers' Federation
- iv. Mauritius Export Association

Data Collection: In order to prepare the LIPFS, a multi-pronged approach has been adopted to collect information on the graduate labour market. Both the demand and supply sides of the labour market have been gauged using information from the following sources:

Demand Side:

- i. Employers' Survey (TEC)
- ii. Human Resource Development Plan and Training Needs Analysis (Human Resource Development Council)
- iii. Scarcity areas in the public sector (Public Service Commission)
- iv. Demand trends for professionals in New and Emerging sectors (Board of Investment)
- v. Feedback by phones from key informants in various sectors

Supply Side:

- i. Enrolment Statistics (TEC)
- ii. Graduate Tracer Study (TEC)
- iii. Statistics on Registered Unemployed Graduates/Professionals (Ministry of Labour, Industrial Relations & Employment)
- iv. Statistics on Unemployed Registered Graduates (Youth Employment Programme)

The Employers' Survey was amongst the main data-gathering instruments used to gauge demand for high-level human resources in the country including the areas where employers were experiencing or foreseeing difficulties to recruit graduates. The survey targeted 591 institutions

(214 public institutions and 377 private institutions) within the country. The fieldwork was carried out between June and October 2013. The study was supplemented by feedback through direct interaction through phone calls to some employers as well as by secondary data from studies and surveys pertaining to the graduate labour market.

In parallel, international benchmarks were used concerning the ratios of professionals to population in certain disciplines, where available, to determine whether there exists an oversupply or scarcity in certain fields. Emphasis was also laid on emerging and potential new pillars of economic growth in line with the country's economic development agenda.

On the supply side, a projection of the output of graduates by discipline was carried out using latest tertiary enrolment data. This was used as proxy indicators for calculating the potential number graduates expected to enter the labour market in the foreseeable future.

On the basis of the above, a thorough assessment of both demand and the supply of graduates by discipline was undertaken following which the LIPFS has been developed. Due attention was paid in the final analysis to the state of unemployment amongst graduates as well as the place occupied by expatriate professional staff in the economy. The LIPFS thus comprises disciplines in respect of which prospects for employing a critical mass of graduates are deemed to be real.

Prior to its finalization, the LIPFS was circulated to both the private and public sector organizations and consultations held with each in turn, to get their feedback in view of validating the List.

Note of Caution

The fact that only 1 in 4 employers participated in the Employers' Survey imposes certain limitations as to the breadth and depth of the LIPFS, both in terms of disciplines identified and the projected critical mass of graduates. This, notwithstanding the exiguity and dynamism of the local graduate labour market which increases the risk for human resource needs in any one discipline to be changed from scarcity to oversupply in a short period of time. In this context, the LIPFS 2014/2015 should be treated as being indicative of the current and likely future trends of the graduate labour market. Users of the LIPFS are, accordingly, invited to exert caution and to consult the appropriate authorities conversant with latest labour market developments, prior to taking any decision concerning their final choice of study.

UNDERGRADUATE LEVEL	<i>Projected Demand</i>		
	<i>Greater than 20</i>	<i>Between 10 and 20</i>	<i>Less than 10</i>
1. Education			
1.1 Teacher Training and Education Science			
1.1.1. Educational Psychology	✓		
1.1.2. Special Needs Education	✓		
1.1.3. Pedagogy & Curriculum	✓		
2. Humanities and Arts			
2.1 Arts			
2.1.1. Creative Arts	✓		
2.1.2. Design and Technology	✓		
2.1.3. Multimedia Technology and Design	✓		
2.1.4. Theatre Arts/ Film Production	✓		
2.2 Humanities			
2.2.1. Languages -Arabic, Tamil, Telugu, Marathi, Mandarin (<i>Teaching</i>)	✓		
2.2.2. Translation Studies	✓		
3. Social Sciences, Business and Law			
3.1 Business and Administration			
3.1.1. Entrepreneurship Management	✓		
3.1.2. Fund/ Trust Management	✓		
3.1.3. Litigation, Arbitration, Mediation	✓		
3.1.4. Trust Law	✓		
3.1.5. Logistics/Supply Chain Management	✓		
3.1.6. Real Estate/Property Financing and Management	✓		

UNDERGRADUATE LEVEL	<i>Projected Demand</i>		
	<i>Greater than 20</i>	<i>Between 10 and 20</i>	<i>Less than 10</i>
4. Science			
4.1 Life Sciences			
4.1.1. Bio-Informatics	✓		
4.1.2. Biotechnology			✓
4.1.3. Marine Sciences	✓		
4.1.4. Microbiology	✓		
4.1.5. Nanotechnology	✓		
4.1.6. Pharmacy/ Pharmaceutical Sciences	✓		
4.2 Physical Sciences			
4.2.1. Geomatics		✓	
4.2.2. Hydrology		✓	
4.2.3. Oceanography	✓		
4.2.4. Ocean Management Sciences and Engineering	✓		
4.3 Mathematics and Statistics			
4.3.1. Legal Metrology		✓	
4.4 Computing			
4.4.1. E-Commerce/ E-Marketing	✓		
4.4.2. Mobile Application Development	✓		
4.4.3. Network Engineering	✓		
4.4.4. IT with Forensics- Cyber Law and Cyber Crime	✓		
4.4.5. Software Development/Engineering	✓		
4.4.6. Systems Engineering	✓		
4.4.7. Web Design	✓		

UNDERGRADUATE LEVEL	<i>Projected Demand</i>		
	<i>Greater than 20</i>	<i>Between 10 and 20</i>	<i>Less than 10</i>
5. Engineering, Manufacturing and Construction			
5.1 Engineering and Engineering Trades			
5.1.1 Civil Engineering	✓		
5.1.2 Electrical Engineering	✓		
5.1.3 Electronic Engineering	✓		
5.1.4 Hydrology/ Water Resource Engineering		✓	
5.1.5 Industrial/Manufacturing Engineering	✓		
5.1.6 Marine/ Coastal/Offshore Engineering	✓		
5.1.7 Mechanical Engineering			✓
5.1.8 Product Design Technology	✓		
5.1.9 Quantity Surveying	✓		
5.1.10 Renewable Energy Engineering	✓		
5.1.11 Structural Engineering	✓		
5.1.12 Telecommunication Engineering	✓		
5.1.13 Traffic/Transportation Engineering	✓		
5.1.14 Thermal Engineering	✓		
5.2 Manufacturing and processing			
5.2.1. Fiber Science/ Apparel Design	✓		
5.2.2. Product Design Technology	✓		
5.2.3. Textile Science and Technology	✓		
5.3 Architecture and Building			
5.3.1 Architecture	✓		
5.3.2 Green Architecture	✓		
5.3.3 Interior Design and Decoration	✓		
5.3.4 Landscape Architecture	✓		

UNDERGRADUATE LEVEL	<i>Projected Demand</i>		
	<i>Greater than 20</i>	<i>Between 10 and 20</i>	<i>Less than 10</i>
6. Agriculture			
6.1 Agriculture, Forestry and Fishery			
6.1.1. Aquaculture	✓		
6.1.2. Bio-security/ Food Safety	✓		
6.2 Veterinary			
6.2.1. Veterinary Medicine/ Sciences	✓		
7. Health and Welfare			
7.1 Health			
7.1.1. Food and Nutrition (<i>Teaching</i>)	✓		
7.1.2. Genetic Studies	✓		
7.1.3. Podiatry			✓
7.1.4. Epidemiology			✓
7.1.5. Bio-medical Engineering			✓
7.1.6. Radio therapy		✓	
7.1.7. Dental Mechanics/ Prosthesis			✓
7.1.8. Dental Technician (Equipment/ Maintenance)			✓
7.1.9. Nursing <i>with special reference to</i>			
- Intensive Care	✓		
- Anesthesiology	✓		
- Primary Care	✓		
- Midwifery	✓		
8. Services			
8.1 Environmental Protection			
8.1.1. Disaster Management	✓		

UNDERGRADUATE LEVEL	<i>Projected Demand</i>		
	<i>Greater than 20</i>	<i>Between 10 and 20</i>	<i>Less than 10</i>
8.1.2. Energy/Resource/Sustainable Management	✓		
8.1.3. Energy Engineering	✓		
8.1.4. Environmental Engineering	✓		
8.1.5. Ocean Disaster Prevention/Protection	✓		

POSTGRADUATE LEVEL	<i>Projected Demand</i>		
	<i>Greater than 20</i>	<i>Between 10 and 20</i>	<i>Less than 10</i>
1. Education			
1.1 Teacher Training and Education Science			
1.1.1. Curriculum Studies (Design and Development)	✓		
1.1.2. Special Education Needs		✓	
2. Social Sciences, Business and Law			
2.1 Business and Administration			
2.1.1. Asset and Investment Management	✓		
2.1.2. Fisheries Economics		✓	
2.1.3. Fund Management	✓		
2.1.4. Innovation and Entrepreneurship Management	✓		
2.1.5. Islamic Finance	✓		
2.1.6. Logistics/Supply Chain Management	✓		
2.1.7. Marine Surveying		✓	
2.1.8. Maritime Safety and Security Management		✓	
2.1.9. Port and Terminal Management			✓
2.1.10. Property/Facility Management	✓		
2.1.11. Quality Management	✓		
2.1.12. Risk Management	✓		
2.1.13. Shipping and Logistics	✓		
2.2 Law			
2.2.1. Arbitration Law	✓		
2.2.2. Commercial Law	✓		
2.2.3. Competition Law	✓		
2.2.4. Cyber Law	✓		

POSTGRADUATE LEVEL	Projected Demand		
	Greater than 20	Between 10 and 20	Less than 10
2.2.5. Financial Services Law	✓		
2.2.6. Intellectual Property Law		✓	
2.2.7. Maritime Law		✓	
2.2.8. Trust Law	✓		
3. Science			
3.1 Life Sciences			
3.1.1. Marine Biology/Science	✓		
3.1.2. Toxicology		✓	
3.2 Physical Sciences			
3.2.1. Hydrology		✓	
3.2.2. Oceanography	✓		
3.3 Computing *			
3.3.1. Database and Network Administration	✓		
3.3.2. E-Commerce/E-Business/E-Logistics/E-Marketing	✓		
3.3.3. Internet Security	✓		
3.3.4. Multimedia and Interactive Computer Systems	✓		
3.3.5. Software Development / Engineering	✓		
3.3.6. Web Design and Development	✓		
4. Engineering, Manufacturing and Construction			
4.1 Engineering and Engineering Trades			
4.1.1. Civil Engineering	✓		
4.1.2. Electrical/Electronic Engineering	✓		
4.1.3. Geotechnical Engineering	✓		

*Please see addendum at page 14

POSTGRADUATE LEVEL	Projected Demand		
	Greater than 20	Between 10 and 20	Less than 10
4.1.4. Hydraulic Engineering	✓		
4.1.5. Industrial/Manufacturing Engineering	✓		
4.1.6. Marine/Coastal Engineering	✓		
4.1.7. Mechanical Engineering	✓		
4.1.8. Structural Engineering	✓		
4.2. Manufacturing and processing			
4.2.1. Textile Science and Technology	✓		
4.3 Architecture and Building			
4.3.1. Architecture with specialization in Energy Efficient Building	✓		
4.3.2. Green Architecture	✓		
5. Agriculture			
5.1. Veterinary			
5.1.1. Veterinary Medicine with Specialisation in Reproduction/Virology/Microbiology/Pathology/Surgical/Aquatic Diseases and Aquaculture/ Epidemiology and Disease Surveillance	✓		
6. Health and Welfare			
6.1 Health			
6.1.1. Anaesthesia			✓
6.1.2. Ayurvedic Medicine			✓
6.1.3. Cardiac Surgery			✓
6.1.4. Dermatology			✓
6.1.5. Emergency Medicine			✓
6.1.6. Endocrinology			✓
6.1.7. Endodontics			✓
6.1.8. Epidemiology			✓

POSTGRADUATE LEVEL	Projected Demand		
	Greater than 20	Between 10 and 20	Less than 10
6.1.9. Gastroenterology			✓
6.1.10. Genetic Medicine			✓
6.1.11. Geriatrics			✓
6.1.12. Haematology			✓
6.1.13. Invasive Cardiology			✓
6.1.14. Invasive Care Medicine			✓
6.1.15. Maxillo Facial Surgery			✓
6.1.16. Neonatology			✓
6.1.17. Nephrology			✓
6.1.18. Neurosurgery			✓
6.1.19. Obstetrics and Gynecology	✓		
6.1.20. Occupational Health			✓
6.1.21. Oncology			✓
6.1.22. Ophthalmic Surgery			✓
6.1.23. Pediatric Cardiology			✓
6.1.24. Pediatric Psychiatry			✓
6.1.25. Primary Care (Physician)	✓		
6.1.26. Primary Health (Specialist)			✓
6.1.27. Pediatric Surgery			✓
6.1.28. Pedodontics			✓
6.1.29. Periodontics			✓
6.1.30. Public Health Dentistry			✓
6.1.31. Prosthodontics			✓
6.1.32. Vascular Surgery			✓
6.1.33. Transplantation Surgery			✓
6.1.34. Virology			✓

POSTGRADUATE LEVEL	<i>Projected Demand</i>		
	<i>Greater than 20</i>	<i>Between 10 and 20</i>	<i>Less than 10</i>
7. Services			
7.1 Environmental Protection			
7.1.1. Coastal Zone Management	✓		
7.1.2. Natural Hazards and Disaster Risk Management		✓	
7.1.3. Energy Audit and Conservation	✓		
7.1.4. Energy Management	✓		
7.1.5. Hazardous Waste Management		✓	
7.1.6. Renewable Energy Systems/Technologies	✓		
7.1.7. Waste Water Management		✓	
7.1.8. Water Resource Management		✓	

Addendum to the LIPFS 2014/2015 for Section 3.3

POSTGRADUATE LEVEL

- 3.3.7 Cloud Computing
- 3.3.8 Disaster Recovery
- 3.3.9 Network Engineering/ Network Security
- 3.3.10 IT Governance
- 3.3.11 System Integration Engineering

Tertiary Education Commission, 24 November 2014