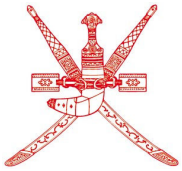
مجلس الإعتماد
Oman Accreditation Council

وزارة التعليم العالي
Ministry of Higher Education



OMAN ACADEMIC STANDARDS

FOR

GENERAL FOUNDATION PROGRAMS

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CONTENTS

1 Introduction 4
1.1 Ministerial Decision 4
1.2 Overview 4
1.3 Purpose of Standards 4
1.4 GFP Exit Standards vs. Higher Education Entrance Standards 4
1.5 Standards Development, Approval and Review Processes 5
1.6 Accreditation of General Foundation Programs 5

2 Program Details 6
2.1 General Foundation Programs 6
2.2 Four Areas of Learning 6
2.3 Structure 7
2.4 Assessment of Student Learning 7
2.5 Certificates of Attainment 8

3 English Language 10
3.1 Aim of the Area 10
3.2 Learning Outcome Standards 10
3.3 Resource Requirements 10
3.3.1 Staffing Resources 10
3.3.2 Teaching Resources 11
3.4 Advice from the GFP Academic Committee 11
3.4.1 Course Structure 11
3.4.2 Assessment 11
3.4.3 Alternative Assessment 12

4 Mathematics 13
4.1 Aim of the Area 13
4.2 Learning Outcome Standards 13
4.2.1 Basic Mathematics 13
4.2.2 Applied Mathematics 14
4.2.3 Pure Mathematics 15
4.3 Resource Requirements 15
4.3.1 Faculty 15
4.3.2 Software 16
4.4 Advice from the GFP Academic Committee 16
4.4.1 Course Structure 16
4.4.2 Assessment 16
4.4.3 The Standards Development and Consultation Process 16

4.4.4 Suggestions 16

5 Computing 19
5.1 Aim of the Area 19
5.2 Learning Outcome Standards 19
5.2.1 Computer Fundamentals 19
5.2.2 Basic Computer Operation and File Management 19
5.2.3 Word Processing 20
5.2.4 Spreadsheets 21
5.2.5 Presentation 21
5.2.6 Internet, WWW and Email 22
5.3 Resource Requirements 22
5.3.1 Faculty 22
5.3.2 Computing Resources 23
5.4 Alternative Standard 23
5.5 Advice from the GFP Academic Committee 23
5.5.1 Course Structure 24
5.5.2 Assessment 24
5.5.3 The Standards Development and Consultation Process 24

6 General Study Skills 25
6.1 Aim of the Area 25
6.2 Learning Outcome Standards 25
6.2.1 Managing time and accepting responsibility 25
6.2.2 Research Skills 25
6.2.3 Taking Notes 26
6.2.4 Giving Presentations 26
6.3 Resource Requirements 26
6.4 Advice from the GFP Academic Committee 27
6.4.1 Assessment 27
6.4.2 Course Structure 27

APPENDIX A. Working Group Members 29

APPENDIX B. Abbreviations and Acronyms 30

1 INTRODUCTION

1.1 Ministerial Decision

Following the decision of the Higher Education Council No.13/2008, HE the Minister for Higher Education issued Ministerial Decision No.72/2008 stating that the General Foundation Programs should be adopted by all public and private higher education institutions operating in the Sultanate of Oman. The deadline for the adoption of these standards is the academic year 2009-2010.

1.2 Overview

The majority of students entering into higher and post-secondary education in Oman first undertake some form of foundation program designed to help prepare them for their further studies. These standards seek to help ensure that those program are of an appropriate quality. In essence, they require that all General Foundation Programs (GFPs) are effective in helping students attain the prescribed student learning outcomes in at least four areas: English, mathematics, computing and general study skills. GFPs which meet these standards will be recognised through formal accreditation by the Oman Accreditation Council (OAC). The standards also recognise that the higher education providers (HEIs) have the primary responsibility for providing high quality teaching and assessment of students. As such, these standards provide flexibility for the HEIs to meet them in the manner they deem best.

1.3 Purpose of Standards

Oman's Academic Standards set the minimum requirements that programs of study are expected to attain. Their primary focus is on student learning outcomes, placing the students and their potential contribution to society at the heart of higher education. These outcomes are not achieved by chance, but are the result of carefully planned and executed formal programs of study. Therefore, the standards also address the minimum structural and resourcing requirements.

Standards are not curricula. It is the responsibility of each HEI to develop the curriculum, teach and assess students, and review and improve its GFP curriculum in line with the requirements of these standards.

These standards may be used for the following purposes:

a) To guide HEIs in the development of their GFPs.

b) To provide information to the public about the learning outcomes of GFPs.

c) To provide the benchmark against which OAC Accreditation Panels will assess GFPs for the purpose of program accreditation.

1.4 GFP Exit Standards vs. Higher Education Entrance Standards

a) The GFP is a compulsory entrance qualification for Omani degree programs, although some of these programs may also require that additional standards are met (see 2.5 g).

b) For other Oman postsecondary qualifications and for degrees in Oman awarded by a foreign HEI, the GFP is not a compulsory entrance qualification for postsecondary and higher education. Rather, it is designed and used to provide additional academic support to those students who require it.

c) Thus, the GFP exit standards and higher education entrance standards are not synonymous and will not necessarily be the same. Oman's system of higher education

includes locally and internationally sourced diploma and degree programs. In the case of the international programs, the entrance standards are determined by the foreign provider. As such, HEIs may require students to achieve higher standards than those specified for the GFP. For example, whereas these GFP standards require students to achieve English language competency at a level equivalent to IELTS 5.0, a foreign provider may require an IELTS score of 6.0 for entry into their degree program. It will be the responsibility of each HEI to make this information clearly available to prospective students.

1.5 Standards Development, Approval and Review Processes

a) These standards were developed by pan-sectoral working groups comprising leading national and international academicians. The members are listed in Appendix A.

b) The process involved national and international benchmarking, a review of past and current national experience, and extensive public consultations including a major symposium held at Sultan Qaboos University (January 2007).

c) In order to ensure their androgogic effectiveness, the standards were crafted taking into account a learning taxonomy derived from work started by Bloom et al.[1]

d) All Oman Academic Standards are formally approved by a Decision from H.E. The Minister of Higher Education on the recommendation of the Oman Accreditation Council.

e) These standards will undergo a minor review by the OAC after each accreditation exercise, taking into account lessons learned through the accreditation process.

f) These standards will undergo a major review, similar to the process used to develop the initial draft, by no later than the year 2012.

1.6 Accreditation of General Foundation Programs

a) The Oman Accreditation Council accredits GFPs. Each accreditation exercise will involve a single Review Panel considering several GFPs at the same time.

b) Accreditation will involve assessment of the GFP against these standards. In cases where a HEI has chosen to include areas of learning in its GFP additional to the four student learning outcome areas in these standards (see section 2.2), they will also be considered by the accreditation panel, taken into account appropriate benchmark standards provided by the applicant HEI.

c) The first accreditation exercise will take place in late 2009. All HEIs will be invited to submit their GFPs for accreditation. Participation will be optional.

d) The second exercise will take place in late 2011. All HEIs whose GFPs are not already accredited will be invited to submit their GFPs for accreditation. Thereafter, it is expected that accreditation exercises will take place every two years (but note (g) below).

e) In time, the OAC will issue a Decision as to when participation will be mandatory. It is anticipated that this may be by 2010.

f) GFPs which meet the required standards AND which are being subject to successful continuous quality improvement efforts by its HEI will be accredited.

g) Accreditation of a GFP lasts for six years. At the end of that time, the accreditation will lapse. It is expected that HEIs will reapply for GFP accreditation at least 10 months before their existing accreditation (where applicable) lapses.

h) HEIs will be entitled to promote the accredited status of their GFP.

i) Further rules and information about accreditation will be available from the OAC (www.oac.gov.om).

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[1] Bloom, B. (Ed.) (1956) *Taxonomy of Educational Objectives: The Classification of Educational Goals*, Susan Fauer Company, Inc.

2 PROGRAM DETAILS

2.1 General Foundation Programs

There are many types of programs of study that use the term 'foundation'. For the purpose of these national standards, a GFP has the following characteristics:

a) It is a formal, structured program of study licensed[2] in the Sultanate of Oman and provided by a licensed HEI.

b) It is designed to prepare students for their postsecondary and higher education studies.

c) It precedes the first formal year of higher education study (except where, on a case by case basis, the HEI has determined that it can be undertaken, in part, concurrently with first year study).

d) It is only required for students who do not otherwise meet all the entrance criteria for the first year of their postsecondary and higher education (which, for Omani degree programs, include these student learning outcomes – see section 1.3).

e) It does not result in the awarding of formal academic credit to the student. And more specifically, a HEI may not award credit for any higher education course which only meets these standards or less.

f) It is general in disciplinary scope, thereby preparing students for a wide variety of subsequent postsecondary and higher education program options (although see clause 2.2(3) below).

g) It is not precisely 'higher education', but nonetheless falls within the ambit of the OAC.

2.2 Four Areas of Learning

a) In order to obtain accreditation, a GFP must be effective in helping students meet the specified learning outcomes in the following four areas of learning:

- English Language
- Mathematics
- Computing
- General Study Skills

b) These four areas have been selected based on the advice of academic staff in Oman, international literature and international benchmarks. They provide a comprehensive intellectual base that is relevant to <u>all</u> further study, and to the development of broad thinking and life skills in general. This strategy is consistent with the development of generic graduate attributes for Oman.

c) A HEI may, at its discretion, choose to supplement these areas of learning with any others that it believes are appropriate, having regard for the higher education programs it provides.

d) HEIs that teach only in Arabic will not need to comply with the English language standards. It is intended that the issue of developing standards for Arabic language, as an alternative to the standards for English language, will be considered during the first review of these GFP standards.

[2] GFPs not already licensed but which, by March 2007, have been operating for more than one semester may apply directly for accreditation without first obtaining a license. The awarding of accreditation will be concomitant with granting the license.

2.3 Structure

a) These standards are designed to ensure HEIs have the necessary level of flexibility in managing their GFPs.

b) The student learning outcome standards in the four areas of learning are not prescriptions for courses/modules. They may be addressed through any variety of courses/modules. For example, there does not need to be a "General Study Skills" module, provided that the HEI can demonstrate that the General Study Skills learning outcomes are satisfactorily attended to in its other GFP modules.

c) For administrative convenience, GFPs are expected to be structured according to the credit hours or credit points system set out in ROSQA (although completion of each course does not earn the student credit).

d) These standards do not impose a time limit on a GFP (unlike pending OAC standards for diploma and degree programs, which will utilize standardised durations of study as well as student learning outcome standards). It is expected that GFPs will be tailored for each student in accordance with their learning needs. A student does not complete the GFP until s/he has met all the learning outcomes. Therefore, a GFP may range in length from none, to one or more semesters (the term 'foundation year' is unhelpful as it assumes a fixed duration irrespective of the students' varied learning needs). It is anticipated that many GFP students may require three or more semesters, until the benefits of changes to the secondary school curriculum become manifest over the next few years.

e) A student undertaking a GFP must not be enrolled in more than 100% of a full time load. In other words, they may not undertake a GFP on top of a full time first year study load. This is in recognition of the fact that students undertaking GFPs require additional support, and are not yet ready to manage more than a full time higher education load.

f) Where the learning outcomes of the GFP are manifestly pre-requisites to further study, then the GFP must be completed prior to a student's enrolment in further study.

g) Non-mandatory guidelines for structuring GFPs in relation to each of the four areas of learning are provided below under their respective sections.

h) A HEI may contract with a second HEI to provide courses to the first HEI's students that will meet these standards.

2.4 Assessment of Student Learning

a) Assessment for GFPs is unique because the assessment for the entry and exit are essentially the same, i.e. designed to determine whether or not the student meets the learning outcome standards.

b) A GFP entrance assessment is required to determine whether a student already has met the required GFP learning outcomes.

c) A student shall not be required to undertake a component of a GFP if s/he has already met the required learning outcomes for that area of learning. If a student satisfies the standards for English, Mathematics and Computing during entry testing then s/he will be awarded the certificate of attainment for the entire GFP (see sections 2.5 and 6.1).

d) The Study Skills standards are not subject to pre-entry testing. This is for pragmatic reasons, because effective assessment of study skills involves methods other than a test or examination. Therefore, the Study Skills component of a GFP will only be required if a student is undertaking any of the English, Mathematics or Computing areas – see section 6.1).

e) An exit assessment is required to determine whether a student has met the required GFP learning outcomes. A student shall not pass the GFP until all the learning outcomes are met.

f) At this time, there will be no standardised national tests. Each HEI will have the responsibility for developing its own methods of assessment against the student learning outcomes in these standards. The HEI must demonstrate that the chosen assessment method is effective in determining whether the student has attained the required learning outcomes.

g) The final assessment result should be either a pass, indicating that the student learning outcomes have been achieved by the student, or a fail. There will be no final grading shown on the official testamur or transcript.

h) All assessment shall be criteria based (i.e. based on the learning outcome standards) and not normative references. Arbitrary scaling of results (for example, ensuring a certain percentage of students pass by moving the pass/fail point down the scale of student results) shall not be permitted.

i) HEIs must have appropriate internal quality controls for its assessment processes. These must include, at least, internal moderation by faculty of examination papers and of marked work prior to the issuance of results, and a transparent appeals process for students.

j) It is expected that HEIs shall also utilize an appropriate and broad range of assessment mechanisms during the program, in order to provide students with feedback on their progress which will assist their learning.

k) The process for accrediting GFPs will include, at least, independent checking of student's marked work and overall assessment results. If the OAC Review Panel determines that students have been passed without meeting the learning outcome standards, then the GFP will not be accredited.

l) If a student fails part of the GFP s/he does not fail the entire GFP and would only need to re-sit the part that s/he failed. However, the student must pass all four learning outcome areas in order to pass the GFP.

m) A student who has not completed their GFP may enroll in some first year degree courses provided that:

- The outstanding GFP component is not evidently a pre-requisite for the first year/level courses being taken (e.g., a student could enroll in a 1st year history course before achieving the Applied Mathematics GFP standards);
- The student's total enrolment (of first year and GFP courses) does not exceed 100% of a full time student load; and
- The student may not undertake any second year/level degree courses until the GFP is completed.

n) In order to ensure that the GFP is sufficiently flexible to allow students to take the time necessary to reach the learning outcomes, the assessment schedule should provide for students to successfully exit at the end of any semester. This may require making all GFP courses available every semester. For example, if a student passes Course 1 (in semester/term1) in an area of learning but then fails Course 2 (in semester 2), s/he ought to be able to repeat Course 2 in the next semester/term, rather than having to wait two semesters.

o) For instances where a cohort of GFP students at a particular HEI will be progressing to subsequent studies taught and assessed in the Arabic language, it will be acceptable for the teaching and assessment of these GFP to be undertaken in Arabic.

2.5 Certificates of Attainment

a) HEIs shall present non-credit 'certificates of attainment' to students who successfully pass the requirements of an accredited GFP, whether they do so during GFP entry or exit testing. The certificate may bear the insignia of the testing HEI and an insignia from the OAC provided to the HEI for this purpose.

b) The 'certificate of attainment' is not intended to be a formal exit qualification and does not represent any commitment to employers about the preparedness of the student for work.

c) The certificate will be issued to students achieving the required standards for all four student learning outcome areas, even if some of those areas were passed by the student via assessment/recognition of prior learning (including adequate secondary school exit marks) (see 2.4).

d) HEIs may present non-credit 'certificates of attainment' to students who successfully pass the requirements of a non-accredited GFP. The certificate may bear the insignia of the testing HEI. However, they shall not bear an insignia of the OAC.

e) The HEI shall, within one week of presenting the certificates to students, submit a complete list of all students who have received such a certificate to the MoHE, who shall keep it on file for such purposes as providing independent confirmation to enquirers. This list shall clearly demarcate certificates for accredited verses non-accredited GFPs.

f) This list may be audited by the MoHE at any time, and will be included in the scope of accreditation assessments by the OAC. Any breach of the standards in this section shall result in disciplinary action by the MoHE and shall, in the case of accredited GFPs, result in immediate forfeiture of the GFP's accreditation.

g) For the purposes of enrolment into the first year of postsecondary or higher education programs of study, all HEIs in Oman will be obliged to recognise a student's certificate for successfully completing an accredited GFP, although HEIs will also have the right to set additional enrolment criteria for certain programs.

h) This period of recognition shall last for two years from the date the certificate is issued. After that, a HEI may choose to re-test a student seeking to enroll for the first year of a postsecondary or higher education program.

3 ENGLISH LANGUAGE

3.1 Aim of the Area

To extend the English language skills of the student to enable active participation in their postsecondary or higher education studies.

3.2 Learning Outcome Standards

Having successfully completed GFP English language a student will be able to satisfactorily:

a) Actively participate in a discussion on a topic relevant to their studies by asking questions, agreeing/disagreeing, asking for clarification, sharing information, expressing and asking for opinions.

b) Paraphrase information (orally or in writing) from a written or spoken text or from graphically presented data.

c) Prepare and deliver a talk of at least 5 minutes. Use library resources in preparing the talk, speak clearly and confidently, make eye contact and use body language to support the delivery of ideas. Respond confidently to questions.

d) Write texts of a minimum of 250 words, showing control of layout, organisation, punctuation, spelling, sentence structure, grammar and vocabulary.

e) Produce a written report of a minimum of 500 words showing evidence of research, note-taking, review and revision of work, paraphrasing, summarising, use of quotations and use of references.

f) Take notes and respond to questions about the topic, main ideas, details and opinions or arguments from an extended listening text (e.g. lecture, news broadcast).

g) Follow spoken instructions in order to carry out a task with a number of stages.

h) Listen to a conversation between two or more speakers and be able to answer questions in relation to context, relationship between speakers, register (e.g. formal or informal).

i) Read a one to two page text and identify the main idea(s) and extract specific information in a given period of time.

j) Read an extensive text broadly relevant to the student's area of study (minimum three pages) and respond to questions that require analytical skills, e.g. prediction, deduction, inference.

3.3 Resource Requirements

3.3.1 Staffing Resources

a) The person with overall academic responsibility for the program must have at a minimum a Master's Degree in English or related fields, a qualification in English Language Teaching (ELT) (e.g. CELTA, DELTA, Trinity TEFL certificate) and at least three years' English language teaching experience at postsecondary level.

b) The minimum requirement for GFP English language teaching staff is either a Bachelor's degree (in a relevant subject and taught and assessed in English) and a qualification in English Language Teaching (ELT) (e.g. CELTA, Trinity TEFL certificate), or a Master's degree (in a relevant subject and taught and assessed in English). Most faculty should have at least two years' English language teaching experience at postsecondary level.

c) It is also desirable that institutions provide evidence of regular staff professional development opportunities in order to maintain and upgrade staff teaching skills (e.g. workshops, provision for conference attendance, peer observation).

3.3.2 Teaching Resources

In order to support students' studies and develop independent learning skills, institutions should provide an environment where students can have regular access to e-learning and computer facilities (e.g. such as an IT or Learning Resource Centre equipped with audio visual aids and computers with software/programs to help students enhance and develop language skills like vocabulary, reading and grammar and listening) and support materials (e.g. a library section dedicated to English language teaching materials or a learning resource centre). Training should be given to staff to facilitate the incorporation of new technology and resources into the teaching program. Where possible, use of these facilities and electronic materials should be incorporated into the teaching programs.

3.4 Advice from the GFP Academic Committee

The contents of this section are not mandatory requirements for licensing or accreditation. They are offered as advice from the GFP Academic Committee and its English Working Group.

3.4.1 Course Structure

a) English courses ought to be semesterised and all courses ought to be available each semester.

b) The ideal maximum class size is about 20.

c) If, upon entry-testing (see below), a student is found to require substantially more English tuition than that for which the GFP provides, then it is recommended that the HEI provide that student with access to appropriate additional support, either directly or by referral.

3.4.2 Assessment

Students entering the GFP should be given some form of needs analysis (e.g. a written test, interview or self-evaluation questionnaire) in order to ascertain their current level of English language proficiency and evaluate which skills areas need to be developed. This will enable the institution to decide on the study program for individual students.

Program assessment methods could include both continuous assessment and end of semester exams. However, in order to ensure that the learning outcomes have been achieved and to avoid institutions focusing solely on exam results, a variety of formative and summative assessment methods[3] could be considered:

- standardized tests/quizzes
- comprehensive exams (teacher-made or institution-made)
- observations
- portfolios
- research projects (group or individual)
- oral presentations, and/or
- evaluated performances
- evaluation of post-program success

Instruments of assessment could be put on a matrix to show which English language learning outcome(s) were being assessed, as shown in Table 1.

[3] Adapted from '*CEA Standards for English Language Programs and Institutions' (2005)* Commission on English Language Program Accreditation, USA

Table 1. Indicative Assessment Schedule for English Language learning outcomes

Learning outcome	*Teacher observation*	*Project*	*Presentation*	*Class Test*
Actively participate in a discussion on a topic relevant to their studies by asking questions, agreeing/disagreeing, asking for clarification, sharing information, expressing and asking for opinions.	✓		✓	
Paraphrase information (orally or in writing) from a written or spoken text or from graphically presented data.		✓	✓	✓
Prepare and deliver a talk of at least 5 minutes. Use library resources, speak clearly and confidently, make eye contact and use body language to support the delivery of ideas. Respond confidently to questions.			✓	
Write texts of a minimum of 250 words, showing control of layout, organisation, punctuation, spelling, sentence structure, grammar and vocabulary.		✓		✓

Examples of good assessment practice include benchmarking and double marking of assignments; a number of institutions invite external assessors to moderate exam papers and written scripts before and after the examination.

Institutions would need to consider incorporating transparent and consistent mechanisms for providing feedback to students on their progress. This could be done through counseling or advising sessions or written feedback (as opposed to % marks). Evidence of a recorded support system for underperforming students is desirable.

3.4.3 Alternative Assessment

An IELTS score of at least 5.0 (with none of the four areas of writing, speaking, listening and reading below 4.5) or a TOEFL score of at least 500 will be deemed equivalent to passing these standards.

4 MATHEMATICS

4.1 Aim of the Area

To ensure that students are equipped with the mathematical understanding and skills necessary to meet the cognitive and practical requirements of postsecondary or higher education studies in a variety of disciplines.

4.2 Learning Outcome Standards

The learning outcomes are designed and categorized into three sets:

- Set 1 Basic Mathematics
- Set 2 Applied Mathematics
- Set 3 Pure Mathematics

The Math foundation curricula must be designed to cover 2 sets of learning outcomes, being either:

- Set 1 and Set 2; or
- Set 1 and Set 3

The choice will depend on the students' background and the intended field of higher education program of study. The structure is shown in the following figure.

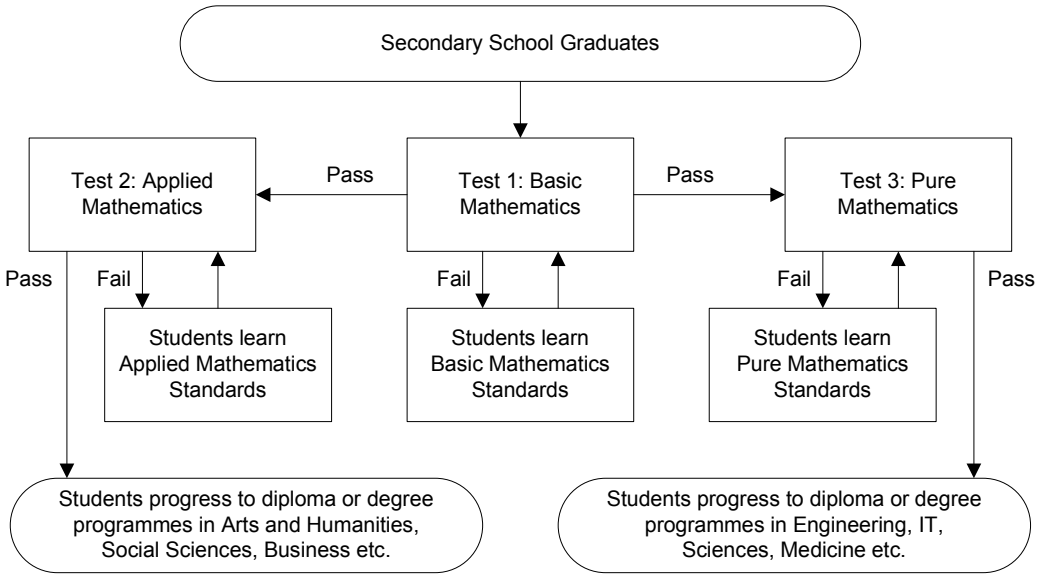

Figure 1. Structure for Mathematics Foundation Program

4.2.1 Basic Mathematics

This component is compulsory for all GFP students. There are no prerequisites for this set. All secondary school graduates are entitled to enrol in this set. Successful completion of this set is a prerequisite for Set 2 (Applied Mathematics) and Set 3 (Pure Mathematics). These learning outcomes are assessed without the use of any type of calculators in order to develop the mental mathematical skills of the students.

Students passing Test 1 (for Set 1) should be able to:

a) Describe the set of real numbers, all its subsets and their relationship.
b) Identify and use the arithmetic properties of subsets of integers, rational, irrational, and real numbers, including closure properties for the four basic arithmetic operations where applicable.
c) Demonstrate an understanding of the exponent laws, and apply them to simplify expression and manipulate fractions, ratios, decimals, and percentages.
d) Understand measurements and conversion from one unit to another.
e) Simplify rational expressions and rationalize numerators or denominators.
f) Translate worded problems into mathematical expression and model simple real life problems with equations and inequalities.
g) Solve linear equations, equations involving radicals, fractional expression and inequalities.
h) Use coordinate plane to solve algebraic and geometric problem, and understand geometric concepts such as equation of a circle, perpendicular, parallel, and tangent lines.
i) Use the three types of symmetry of an equation to sketch its graph.
j) Perform operations on polynomials and manipulate numerical and polynomial expressions and solve first degree equations.
k) Use the quadratic formula to find roots of a second-degree polynomial.
l) Know the relationship between degree and radian measure of an angle and find the length of a circular arc and the area of a sector.
m) Understand trigonometric and circular functions and use the fundamental trigonometric identities in various problems.
n) Solve a right angle triangles using angle of elevation and depression.
o) Apply knowledge of basic algebra and trigonometry in real life problems.

4.2.2 Applied Mathematics

This component is designed for secondary school graduates with Applied Mathematics background. According to the current Omani higher education system, these students are entitled to pursue their higher education studies in Business, Education (in History, Geography, Religious Studies, etc), Linguistic Studies, Social Sciences, Arts, etc. Students are entitled to enroll in this set only after successfully passing Test 1.

Students passing Test 2 (for Set 2) should be able to:

a) Solve two variables linear equations and inequalities and sketch their graph.
b) Interpret a series of three simultaneous inequalities of two variables, display them graphically and determine the solution set.
c) Demonstrate an understanding of the definition of a function and its graph.
d) Solve quadratic, exponential, logarithmic equations, and inequalities.
e) Solve simple real life problems involving linear, quadratic, and exponential functions graphically and algebraically.
f) Determine the zeros and the maximum or minimum of a quadratic function, and solve related problems, including those arising from real world applications.
g) Sketch the graphs of a quadratic, exponential, and logarithmic functions.
h) Compare simple and compound interest and relate compound interest to exponential growth.

i) Understand the inverse relationship between exponents and logarithms and use this relationship to solve related problems.

j) Understand basic concepts of descriptive statistics, mean, median, mode and summarize data into tables and simple graphs (bar charts, histogram, and pie chart).

k) Understand basic probability concepts and compute the probability of simple events using tree diagrams and formulas for permutations and combinations.

4.2.3 Pure Mathematics

This component is designed for secondary school graduates with Pure Mathematics background. According to the current Omani higher education system, these students are entitled to pursue their studies in Engineering, Sciences, Agriculture, Medicine and Health Sciences, Education (Science and Mathematics), Law, etc. Students are entitled to enroll in this set only after successfully passing Test 1.

Students passing Test 3 (for Set 3) should be able to:

a) Demonstrate understanding of the definition of a function and its graph.

b) Solve quadratic equations using quadratic formula.

c) Define and manipulate exponential and logarithmic functions and solve problems arising from real life applications.

d) Understand the inverse relationship between exponents and logarithms functions and use this relationship to solve related problems.

e) Understand the definition of the different types of angles and measure them in degrees and radians.

f) Describe analytically the trigonometric and circular functions.

g) Demonstrate an understanding of trigonometric identities.

h) Use the law of sines and cosines to solve a triangle and real life problems.

i) Use appropriate software to interpret equations and graphs.

j) Understand basic concepts of descriptive statistics, mean, median, mode and summarize data into tables and simple graphs (bar charts, histogram, and pie chart).

k) Understand basic probability concepts and compute the probability of simple events using tree diagrams and formulas for permutations and combinations.

4.3 Resource Requirements

4.3.1 Faculty

a) The program coordinator must have at a minimum a Master's degree in mathematics or related fields, a teaching qualification (such as a teaching diploma or a certificate in higher education) and at least three years' mathematics teaching experience at postsecondary level.

b) The minimum requirement for GFP Mathematics teaching staff is either a Bachelor's degree in mathematics (or a relevant subject) and a teaching qualification (such as a teaching diploma or a certificate in higher education), or a Master's degree in mathematics or related fields. Most faculty should have at least two years' mathematics teaching experience at postsecondary level.

c) It is also desirable that institutions provide evidence of regular staff professional development opportunities in order to maintain and upgrade staff teaching skills (e.g. workshops, provision for conference attendance, peer observation).

4.3.2 Software

Spreadsheets are required for Set 2 and Set 3.

4.4 Advice from the GFP Academic Committee

The contents of this section are not mandatory requirements for licensing or accreditation. They are offered as advice from the GFP Academic Committee and its Mathematics Working Group.

4.4.1 Course Structure

Each set is designed to be delivered in one semester (i.e. 15 weeks) with 3 contact hours per week for lectures plus 1 hour tutorial/problem solving session per week. For each contact hour, the students are expected to work 3 hours outside the class (self study). However, precise arrangements will be for each HEI to determine.

4.4.2 Assessment

It will be the responsibility of each HEI to design and administer its own entry and exit assessment methods for these standards.

4.4.3 The Standards Development and Consultation Process

The development of Mathematics standards involved studying the Omani education system in Grades 11 and 12 where students are given the option to study either "Pure Mathematics" (for those who want to pursue their higher education in Engineering, Science, Information Technology, Medicine, etc) or "Applied Mathematics" (for those who want to pursue their higher education in Business, Administration, Arts, Social Sciences, etc). The Omani syllabi for Mathematics taught in Grades 11 and 12 were used as benchmark in the development of the mathematics foundation program.

In response to feedback on and suggestion for earlier drafts, the Working Group wishes to advise the following:

a) Probability and Statistics are included in the learning outcomes of both Set 2(Applied Mathematics) and Set 3(Pure Mathematics).
b) Faculty requirements have been amended to allow options of emphasising either teaching or disciplinary qualifications.
c) The name of Set 1 (Common Mathematics) has been changed to Set 1(Basic Mathematics) to indicate the basic mathematics level that must be covered by all students.
d) Conversion of units has been included.
e) The proposed mathematics learning outcomes is a prerequisite for all the higher education courses including students opting for higher education in arts.
f) Topics like calculus, differentiation, matrices etc., are not included, since these are beyond the scope of foundation program.
g) Common items in Set 2 and Set 3 are not moved to Set 1, since these items are at higher levels. Set 1 contains only the basic concepts.
h) Linear programming has been removed.

4.4.4 Suggestions

a) A math help support facility (such as a Math Help Centre) is recommended with support from concerned faculty or teaching assistants. As an example, such a centre has been implemented at Sultan Qaboos University and has proven to be effective.
b) Examples of key elements that cover the three sets of learning outcomes (Basic Mathematics, Applied Mathematics, and Pure Mathematics) are shown in Table 2, Table 3

and Table 4. It is important to note that these examples of Key Elements are neither compulsory nor part of the standards. Higher education providers are responsible for designing their own curriculum that covers all three sets of learning outcomes.

Table 2. Key Curriculum Elements for Basic Mathematics

1	**Fundamentals**
1.1	Real Numbers
1.2	Exponents and Radicals
1.3	Measurements and Unit Conversions
1.4	Algebraic Expressions
1.5	Fractional Expressions
1.6	Solving Linear Equations
1.7	Modelling with Equations
1.8	Solving Inequalities
1.9	Coordinate Geometry
1.10	Lines
1.11	Solving Equations and Inequalities graphically
2	**Algebra of Polynomials**
2.1	Polynomials (degree two): Operations on polynomials, Factorizing, Real zeros of Polynomials, Remainder Theorem, Rational zeros, and Factor Theorem.
2.2	Rational Functions
3	**Trigonometry of Right Angle Triangle**
3.1	Angles and Their Measure
3.2	Trigonometry of Right Triangles
3.3	Trigonometric Functions of Angles
3.4	Fundamental Identities

Table 3. Key Curriculum Elements for Applied Mathematics (for secondary school graduates with applied mathematics background)

1	**Inequalities**
1.1	Linear Inequalities of two Variables
1.2	Systems of three Linear Inequalities: Graphic and Algebraic Representations
2	**Functions and Graphs**
2.1	Quadratic functions: Vertex, Domain, Range, Axis of Symmetry and Intercepts and Graph by Transformation
2.2	Modelling with Quadratic Functions
2.3	Algebra of Functions and Compositions
2.4	One-to-One Functions and their Inverses
2.5	Solving Quadratic Equations by Factorizing, Quadratic Formula and Completing Square
3	**Exponential and Logarithmic functions**
3.1	Graphs of Exponential and Logarithmic Functions
3.2	Laws of Logarithms
3.3	Exponential and Logarithmic Equations
3.4	Modelling with Exponential Function
4	**Basic Concepts on Statistics and Probability**
4.1	Measures on Central Tendency (Mean, Median & Mode)
4.2	Measures on Dispersion (Variance & Standard Deviation)
4.3	Introduction to Probability

Table 4. Key Curriculum Elements for Pure Mathematics (for secondary school graduates with pure mathematics background)

1	**Functions and Graphs**
1.1	Vertex, Domain, Range, Axis of Symmetry and Intercepts and Graph by Transformation
1.2	Algebra of Functions and Compositions
1.3	One-to-one Functions and their Inverses
1.4	Solving Quadratic Equations by Factorizing, Quadratic Formula and Completing Square
1.5	Complex Roots of Quadratic Equation
1.6	Modelling with Quadratic Functions
2	**Exponential and Logarithmic Function**
2.1	Exponential and Logarithmic Functions
2.2	Solving Exponential and Logarithmic Functions
2.3	Graph of exponential and logarithmic Functions and Graph of Transformations
2.4	Modelling with Exponential Function
3	**Trigonometry**
3.1	Unit circle and Basic Trigonometric Functions
3.2	Graphs and Graphs of Transformations of Sine, Cosine Functions
3.3	Addition and Subtraction Formulas
3.4	Double-angle, Half-angle and Product-sum Formula
3.5	Inverse Trigonometric Functions
3.6	Solving Trigonometric Equations
3.7	The Laws of Sines and Cosines
4	**Basic Concepts on Statistics and Probability**
4.1	Measures on Central Tendency (Mean, Median & Mode)
4.2	Measures on Dispersion (Variance & Standard Deviation)
4.3	Introduction to Probability

5 COMPUTING

5.1 Aim of the Area

To ensure that students are equipped with the computing and IT understanding and skills necessary to source, process and communicate information related to their postsecondary or higher education studies in a variety of disciplines.

5.2 Learning Outcome Standards

5.2.1 Computer Fundamentals

Students are required to understand the make-up of personal computer system in terms of hardware and software, data storage and memory. Students shall also understand how information networks are used within computing and be aware of the uses of computer based software applications in everyday life.

a) Describe the main functional blocks of a computer system and how they work in sequence to process information.

b) Hardware:
- Identify and describe the function of different hardware components such as CPU, storage systems, types of memories like RAM, ROM etc. and common input and output devices.
- Compare and contrast different types of computers, including network computers, personal computers, laptops and PDAs.
- Explain the terms Hertz (incl. MHz, GHz) and byte (incl. KB, MB, GB, TB).

c) Software:
- Identify and explain the different types of software: operating systems, application software and programming software.
- Install and uninstall software applications.

d) Working with Computers:
- Identify the requirements for a computer suitable for purchasing for student usage.
- Demonstrate a basic understanding of computer ergonomics (seating, lighting, positioning, ventilation etc.) and explain the common health problems associated with computer usage and ways to avoid them.
- Explain the concept of software copyright.
- Explain the terms shareware, freeware, end-user license agreement.
- Explain the Omani data protection legislation.
- Demonstrate basic keyboard skills.

5.2.2 Basic Computer Operation and File Management

Students are required to understand and be familiar with the basic principles of operation of a personal computer system and with basic principles of file management using a computer.

a) Understand and demonstrate proper Switching-ON and Shutting-OFF of the computer.

b) Open, modify, save and close files and application programs.

c) Successfully connect basic peripheral devices (e.g. a printer).

d) Understand the hierarchical structure of drives, files and folders.

e) Understand the meaning and types of file extensions.

f) Understand the different types of menus.

g) Save documents in any permitted location in different formats.

h) Explain different types of viruses (including worms, Trojans etc.) and clean viruses and worm-infected systems with appropriate software.

i) Explain Privacy issues, good passwords and access rights.

j) Demonstrate formatting of floppy disks and removable media; usage of USB drives, writing files to CD-R/RW media and backing up of data.

k) Demonstrate Logging on and off a computer network.

l) Demonstrate how to compress and decompress (zip/unzip) individual files and files in a folder.

m) Demonstrate good password creation practice.

n) Demonstrate searching for files and folders.

o) Demonstrate the use of built-in help menu.

5.2.3 Word Processing

The general objective of this component is to equip students with the essential skills that they need to create good quality documentation during their studies.

a) Recognise, open, modify, navigate, save and close a word application file.

b) Open and close a new or existing document and switch between multiple documents.

c) Understand various page set-up options, page orientation, page sizes and setting up of margins.

d) Understand the use of page layout, page borders and shading.

e) Display/hide toolbars.

f) Understand different types of menus in a word processing application.

g) Explain the difference between text, paragraph, and document level formatting.

h) Identify different text formats, e.g. bold, italic, font type, size and colour; cases, subscript, superscript; different types of bullets/numbering etc.

i) Understand changing the line spacing in a document and aligning text left, centre and right justified.

j) Insert automatic page numbers, header/footer, foot/end notes, auto shapes, pictures, symbols, special characters etc.

k) Use search/replace to find/replace a specific word/phrase in a document.

l) Move/delete/resize picture/image/chart in a document or between different documents.

m) Understand the use of borders and shading in a document.

n) Demonstrate use of automatic spell/grammar checking & correction.

o) Understand some basic short cut keys.

p) Understand various print options and how to print documents after preview.

q) Demonstrate formatting at the character, paragraph and document levels.

r) Demonstrate the ability to convert written text into a formatted electronic document.

s) Insert text and/or characters and/or pictures/drawings from various sources.

t) Demonstrate use of the copy/cut/paste functions.

u) Explain the terms associated with a table, e.g.: column, row, cell, and demonstrate table creation, manipulation of cells, data insertion and formatting.

v) Use built-in help functions.

w) Understand and demonstrate the ability to print documents using various print options, using the default printer and a network printer.

5.2.4 Spreadsheets

The general objectives of this component are to equip students with the essential skills that they need to create good quality spreadsheets during their studies, and the understanding of Spreadsheet packages so that they can utilize it for data processing tasks during their studies and in future.

a) Recognise, open, modify, navigate, save and close a spreadsheet application file.
b) Identify the main components of a spreadsheet window.
c) Explain the basic uses of spreadsheets.
d) Create, Open, Save, and Close spreadsheets.
e) Use the help system effectively.
f) Identify and use the different menus and toolbars to set up the worksheets.
g) Demonstrate how to insert, store and manipulate data.
h) Demonstrate how to handle (Insert, rename, delete, duplicate, move etc.) worksheets.
i) Generate various formulas using built-in functions and use them appropriately and correctly to solve problems.
j) Demonstrate the formatting of data, cells, rows and columns in a worksheet.
k) Create and manipulate different types of charts/graphs on the worksheet data.
l) Explain usage of formulas and functions in a worksheet.
m) Explain generating various charts and graphs.
n) Explain how to sort, link and consolidate spreadsheets.
o) Demonstrate the understanding of various print options and how to print spreadsheets and charts after appropriate page set-up and pre-view.
p) Demonstrate use of the edit (copy/cut/paste etc) functions.
q) Demonstrates the ability to reproduce a hand written table as an electronic spreadsheet.
r) Demonstrates the ability to perform basic analysis of data using graphs and charts.

5.2.5 Presentation

The general objectives of this component are to equip students with the essential skills that they need to create professional presentations during their studies and an understanding of presentation packages so that they can utilize them for presenting information in an effective manner during their studies and in the future.

a) Recognise, open, modify, navigate, save and close a presentation application file.
b) Identify and use different design layouts and presentation view modes.
c) Use help system effectively.
d) Demonstrate how to use display/hide toolbars.
e) Identify and use different types of menus in a presentation application.
f) Explain the difference between master slide and other slides.
g) Explain Animation and Colour scheme.
h) Explain the main formatting features to improve the appearance of the slides.
i) Demonstrate the ability to use various print options to print the presentation slides.
j) Demonstrate the ability to insert pictures and objects to enhance the outlook of the presentation.
k) Demonstrate the use of adding notes, header and footer, updated dates and automatic numbering for the presentation.

l) Demonstrate the ability to duplicate, move slides within the presentation and between open presentations.

m) Demonstrate the use of transition and animation effects.

n) Demonstrate the use of proofing tools to correct the content of the presentation.

5.2.6 Internet, WWW and Email

The general objective of this component is to introduce students to the fundamentals of computer networks and communication systems which assist in providing the students with the tools for searching and accessing information remotely and using electronic mails for communicating with other people.

a) Network and Internet Fundamentals:
   - Identify network fundamentals, types and the benefits and risk of network computing.
   - Understand the history and jargon associated with the Internet.

b) Browsing the Internet:
   - Identify the purpose of a browser in accessing information on the World Wide Web (WWW) and navigate the Web.
   - Understand how to deal with web browser tools such as: Book Mark, display and hide built-in toolbars, deleting browsing history and print web pages.
   - Be able to search the Internet for information using search engine such as: Google, Yahoo, Ask Me, etc.

c) Electronic Mail:
   - Understand how electronic mail works including the components of electronic mail message, electronic mail address, and electronic mail options.
   - Create an e-mail account, read and send electronic mail messages, reply and forward electronic mail message, Use of Cc – Bcc, and manage attachments.
   - Create a new address list, add, delete, and update a mail address to an address list.
   - Manage the inbox through sorting messages, creating folders and finding message.
   - Identify the sent items; deleted items, and Junk E-Mail folders.
   - Identify the security issues with electronic mails.

d) Identify how computers are used in different areas of work, school and home:
   - Identify risks to personal and organizational data.
   - Understand the protected web sites, use of digital certificates, encryption – decryption, uses of firewall and how to get protected from Hackers etc.
   - Describe the effect of IT on our lives and on society generally.

5.3 Resource Requirements

5.3.1 Faculty

a) The person with overall academic responsibility for the program must have at a minimum a Master's degree in computing science or related fields (such as Information Technology), a teaching qualification (such as a teaching diploma or a certificate in higher education) and at least three years' computing teaching experience at postsecondary level.

b) The minimum requirement for GFP computing teaching staff is either a Bachelor's degree in computing science (or a relevant subject) and a teaching qualification (such as a teaching diploma or a certificate in higher education), or a Master's degree in computing science (or a relevant subject). Most faculty should have at least two years' computing teaching experience at postsecondary level.

c) It is also desirable that institutions provide evidence of regular staff professional development opportunities in order to maintain and upgrade staff teaching skills (e.g. workshops, provision for conference attendance, peer observation).

5.3.2 Computing Resources

a) Adequate number of Personal Computer (PC) systems (with 1:1 student to PC ratio), with contemporary hardware and software configurations and with necessary peripheral devices (refer to Table 5).

b) Facilities for students to print.

c) Word processing, spreadsheet and presentation packages, of a version capable of handling most contemporary user requirements.

d) All software used by the HEI must have current licenses.

e) Network login facility.

f) Constant access to the Internet.

g) Appropriate Reference books.

Table 5. Minimum Hardware and Software Configuration for Student Computers

Computer Components	Minimum Requirements
CPU	Pentium III 500 MHz or higher processor, Mac G4 Processor or higher, or equivalent processor
Operating System	Windows 2000 with SP1/XP with SP2/Vista, Mac OS X version 10.2.8 or later, Linux, or any equivalent operating system
RAM	256 MB or more
Hard Disk	1 GB hard drive space or more
Video	1024 x768 resolution or higher
Monitor	15" or more; colour
Network Adapter	Fast Ethernet 100Mbps or more
Word processor	Microsoft word XP/2003/Vista, Open Office Word, or any other equivalent word processor
Spread Sheet Software	Microsoft Excel XP/2003/Vista, Open Office Excel, or any other equivalent Spread sheet software
Presentation Software	Microsoft PowerPoint XP/2003/Vista, Open Office PowerPoint, or any other equivalent presentation software
E-Mail User Agent	Microsoft outlook XP/2003/Vista, Open Office outlook, outlook express, Yahoo e-mail, Google e-mail, or any other equivalent E-Mail user agent software
Web Browser	Internet Explorer (IE) 5 or higher, Opera 8 or higher, Netscape 8.1.0 or higher, or any other equivalent web browser

5.4 Alternative Standard

A HEI which has an accredited ICDL Training Centre and uses it for the GFP will be deemed to have met these program standards and will automatically pass the assessment of its Computing program for the purposes of GFP accreditation.

5.5 Advice from the GFP Academic Committee

The contents of this section are not mandatory requirements for licensing or accreditation. They are offered as advice from the GFP Academic Committee and its Computing Working Group.

5.5.1 Course Structure

The program structure is limited to a definition of numbers of hours so that higher education providers have the flexibility to offer the computing & IT component of their GFP either in 'block' or 'weekly' mode. At least 60 hours is recommended.

5.5.2 Assessment

a) The program is essentially competency based and hence, the assessment also is expected to be competency based. Students will be required to be assessed for demonstration of conceptual understanding and practical competency in all the areas in this standard by way of using suitable methods of assessment including multimedia based tools.

b) Attainment by the students of ICDL will be regarded as equivalent to them having met these standards.

5.5.3 The Standards Development and Consultation Process

The Working Group took into consideration a wide range of feedback on the draft standards, including new suggestions, received during and after the symposium. Many suggestions were accepted and have been incorporated into these final standards. Specific examples follow:

a) Some advanced learning outcomes have been removed because they are too advanced for a GFP.

b) The number of learning outcomes in each area has been reduced in order to ensure the totality is achievable within 60 hours.

c) The suggestion to have two levels of IT standards – basic and advanced – was not accepted by the Working Group because it would exceed the requirements and time available for a GFP. HEIs have the prerogative to structure these standards according to two modules, the first being a prerequisite for the second, if they so choose.

d) The suggestions to have standards on databases and Web publishing were not accepted by the Working Group because these areas are beyond the level of foundation IT and are not 'generic' (i.e. a large proportion of higher education students will not require these skills for their further studies).

e) A range of international standards were taken into consideration, including ICDL, Cambridge and IC^3®.

6 GENERAL STUDY SKILLS

6.1 Aim of the Area

To equip students with fundamental study and academic skills needed for postsecondary or higher education studies.

General Study Skills may be taught either as specific course/s, or may be embedded into each of the English, Mathematics and Computing courses. This will require careful attention to ongoing curriculum and instructional design by HEI faculty.

Students who meet the English, Computing and Mathematics standards upon entry testing are awarded the GFP certificate in full, and thereby exempt from the Study Skills standards in the GFP (see 2.4(c)). Therefore, it is expected that HEIS will also be able to demonstrate how they have incorporated these Study Skills standards into the first year of their diploma and degree programs.

6.2 Learning Outcome Standards

6.2.1 Managing time and accepting responsibility

a) Work in pairs or groups and participate accordingly i.e. take turns, initiate a discussion, interrupt appropriately, express an opinion.
b) Follow university policies on attendance and punctuality.
c) Bring required materials (pens, pencils, folder, etc) to class.
d) Work to imposed deadlines.
e) Show respect for teachers and others and their rights to have a difference of opinion.
f) Use a variety of study techniques.
g) Create term planners and study schedules noting key dates/events.
h) Complete homework on time.
i) Continually revise one's work.
j) Independently access and use computer labs and the internet for language learning.
k) Identify preferred study strategies based on learning styles.
l) Organise a feasible study schedule that accommodates other responsibilities.
m) Describe learning experiences, challenges, insights in a daily journal.
n) Organise and maintain a system of recording vocabulary (keep a vocabulary log).
o) Organise and maintain a portfolio of one's work.

6.2.2 Research Skills

a) List the key ideas to guide search for information.
b) Use the library system for finding, borrowing and returning library material.
c) Use an English-English dictionary for language learning.
d) Use a contents page and an index to locate information in a book.
e) Extract relevant information from a book or article using a battery of reading strategies (e.g. skimming, scanning, etc.).
f) Locate a book/journal in the library using the catalogue.
g) Find topic-related information in a book/journal in the library using the catalogue.

h) Find specific information using internet search engines and electronic resources.
i) Cite a source in accordance with academic conventions.
j) Classify and sort new information.
k) Select or reject a source based on difficulty level, relevance and currency.
l) Assess the reliability, objectivity and authenticity of a source.
m) Summarise and paraphrase information in one's own words.

6.2.3 Taking Notes

a) Recall and define main concepts.
b) Utilize abbreviations and symbols.
c) Use English rather than Arabic for notes in margins and glossing vocabulary.
d) Extract and record key information (the gist) from a written or spoken source based on own interpretation of information.
e) Adopt a note-taking strategy (e.g. Cornell system; mind mapping).
f) Support key points with relevant additional details.
g) Organise information to enable quick reference at a later date.
h) Date one's notes.
i) Use notes to create a summary.
j) Reproduce key information and supporting details from notes in one's own words.
k) Sort out information and reject irrelevant pieces.

6.2.4 Giving Presentations

a) Outline and define main concepts.
b) Address questions from the audience.
c) Plan and conduct a presentation based on information from written material, interviews, surveys, etc.
d) Speak in a clearly audible and well paced voice.
e) Follow a presentation format.
f) Use presentation language (discourse markers etc.).
g) Achieve the key aim of informing the audience.
h) Make use of audio/visual aids when giving oral presentations.
i) Tailor content and language to the level of the audience.
j) Maintain some eye contact with audience.
k) Speak from notes in front of an audience using index cards.
l) Observe time restrictions in presentations.
m) Organise and present information in a logical order at a comprehensible speed.
n) Invite constructive feedback and self-evaluate the presentation.

6.3 Resource Requirements

Study skills are considered part of the English standards. To help students develop learner autonomy an environment for promoting self study should be set up (e.g. a self access centre). There should be working areas that are equipped with computers and software that are adequate for contemporary student use, instructional programs and reading materials. Experienced facilitators should be available to help and guide the students in their independent learning.

6.4 Advice from the GFP Academic Committee

The contents of this section are not mandatory requirements for licensing or accreditation. They are offered as advice from the GFP Academic Committee and its Study Skills Working Group.

6.4.1 Assessment

The acquisition of study skills should be assessed through a combination of summative and formative methods. Some examples follow:

a) Teacher Mark: A few marks (3 to 5 marks) are given to students for their in-class participation, attendance, punctuality in turning in homework and coming to class.

b) Student portfolio: All students must keep a portfolio of their work and update it continuously. They also use the portfolio to create their study plans and their reflections on their learning and learning styles.

c) Student Project: Students undertake projects to help them acquire and apply the research and presentation skills. The project is part of the requirements for the study skills course. The project involves researching a topic and conducting a presentation. The students are assessed on their research and presentation.

d) Out of class work log: Students are expected to take charge of their own learning outside the class time. They should show evidence of their work in a log which is checked by the teacher regularly. The log should be part of the student assessment (2 to 4 marks). The out of class work includes using language programs and reading materials in the self access centre and other resources.

e) Vocabulary log: Students keep and update a log of new vocabulary they learn in all courses. The log is checked by the teacher continuously. A mark is given based on the content and organization of the log (2 to 4 marks). Students should be given clear guidelines about the vocabulary they should record and how.

f) Institutions could also choose to have more authentic methods of assessment, such as interviews, role plays, peer reviews, debates, etc.

Instruments of assessment could be put on a matrix to show which Study Skills learning outcome(s) were being assessed, as shown in Table 6.

Table 6. Indicative Assessment Schedule for English Language learning outcomes

Learning outcome	*Teacher mark*	*Student portfolio*	*Out of class work log*	*Vocabulary log*	*Short tests**	*Projects*
Managing time and accepting responsibility	✓	✓	✓	✓		
Research skills						✓
Taking notes					✓	
Giving presentations						✓

* A series of short tests that asks the students to create notes from different courses, a text and a listening and then use their notes to answer questions. The tests could be either part of a study skills course or the English Language listening course.

6.4.2 Course Structure

As stated previously, General Study Skills may be taught either as specific course/s, or may be embedded into each of the English, Mathematics and Computing courses. To facilitate the acquisition and application of the study skills learning outcomes, a number of measures could be taken:

a) The skills need to be taught and assessed throughout the GFP but at varying degrees of difficulty at each proficiency level. This could be done through introducing a series of

mini study skills courses or workshops that could help students learn and apply the skills through explicit instruction and application.

b) The acquisition of the study skills is largely learner dependent. It is therefore important that the students are made aware of the nature and requirements of the college culture through student guides, brochures, etc.

c) The skills could be reinforced in all courses in the GFP and beyond.

APPENDIX A. WORKING GROUP MEMBERS

The GFP Academic Committee:

- Dr Rahma Al-Mahrooqi (Chairperson), Sultan Qaboos University
- Dr Josephine Palermo (Executive Officer), Ministry of Higher Education

and the following members:

English Language Working Group:

- Ms Tess Goodliffe (Chairperson), Caledonian College of Engineering
- Teresa O'Donnell, Commission on English Language Program Accreditation, USA
- Mr Redha Taqi Al Qubtan, Institute of Health Sciences
- Dr Maha Kobeil, Majan College
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Mathematics Working Group:

- Dr Sebti Kerbal (Chairperson), Sultan Qaboos University
- Dr Richard Voorhees, Voorhees Group, USA
- Dr Joseph Mani, Modern College of Business and Science
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- Dr Saad Salman Ahmed, Higher College of Technology
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Computing and IT Working Group:

- Dr Mohammed Elhadi (Co-Chairperson), Sultan Qaboos University
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The final document and the introduction were compiled and edited by Martin Carroll, Oman Accreditation Council.

APPENDIX B. ABBREVIATIONS AND ACRONYMS

The following abbreviations, acronyms and terms are used in these standards. As necessary, they are explained in context. In some cases, URLs are provided to facilitate further enquiries about these acronyms and terms.

CELTA	Certificate in English Language Teaching to Adults
DELTA	Diploma in English Language Teaching to Adults
ELT	English Language Teaching
GFP	General Foundation Program
HEI	Higher Education Institution
IC^3®	Certiport Internet and Computing Core Certification (http://info.certiport.com/yourpersonalpath/ic3Certification/)
ICDL	International Computer Driving License (www.icdlgcc.com)
IELTS	International English Language Testing System (www.ielts.org)
IT	Information Technology
MoHE	Ministry of Higher Education (www.mohe.gov.om)
OAC	Oman Accreditation Council (www.oac.gov.om)
ROSQA	Requirements for Oman System of Quality Assurance (available from http://www.oac.gov.om/)
SQU	Sultan Qaboos University (www.squ.edu.om)
TOEFL	Test of English as a Foreign Language (www.ets.org/toefl/)
Trinity TEFL	Trinity Teaching English as a Foreign Language

"Semester" and "academic term" are used to be synonymously for the purposes of these standards.