Climb Level 4

Your personalised, online solution to meeting ICAO English language proficiency requirements

A proposal for Critical National Infrastructure Agency, UAE

Overview:

• Acknowledged as leaders in their respective fields of Aviation English training and Speech Recognition technology, Mayflower College and Carnegie Speech have combined their expertise to develop the online assessment and training solution known as Climb Level 4.

• CL4 is designed to enable ATCOs and pilots to meet the ICAO language proficiency requirements. Through using the latest techniques in Speech Recognition technology it covers all 6 of the language skills required to achieve ICAO level 4 and above (pronunciation, vocabulary, structure (grammar), comprehension, fluency and interactions).

• CL4 is most suitable for pilots and controllers whose level of English is presently ICAO level 3 or 4 and who wish to improve to level ICAO 4 or 5.

• All of the exercises and reference material in Climb Level 4 are aviation-related.

• For all exercises students can choose to receive clues, check their answers or see the correct answers.

• Access to the CL4 programme is limited to 100 hours, spread over either 3 or 6 months. A trial programme of 5 hours (spread over one week) is also available.

Mayflower College:

• was founded in 1988 and provides English language training for international learners.
• welcomes to the UK approximately 1500 learners per year from 50+ countries.
• has been involved in Aviation English since 1992, providing general and aviation-specific courses to air traffic controllers and pilots (see www. aviation-english.com).
• is the founder of the Test of English for Aviation (T.E.A.) (see www.TEA-test.com).
• was represented on the ICAO PRICESG Linguistic Sub Group.
• was an invited presenter at the ICAO workshops in Moscow in June 2006 and May 2007.
• was an invited speaker and moderator at the ICAO Regional Workshop in Paris in September 2006.
• was an invited speaker at ICAO Aviation Language Symposium in Montreal in May 2007.

Carnegie Speech:

Carnegie Speech is the premier developer of software for assessing and teaching spoken language skills.

By integrating speech recognition, artificial intelligence and language training into powerful software solutions, Carnegie Speech enables personalized, effective and scalable spoken-English training.

Carnegie Speech's technical and managerial heritage is from Carnegie Mellon University's renowned Language Technology Institute. With a global clientele in the Education, Aviation, Government, BPO, Health Care and Publishing sectors, Carnegie Speech provides spoken-language training in over 20-countries.

Assessment:

Before the training programme begins the student is required to take the initial assessment. Another version of this test is also taken at the end of the programme in order to measure overall progress.

The assessment lasts for 45 minutes and contains 140 questions covering listening, grammar and vocabulary. The result is presented as a percentage as well as an overall ICAO grade.

Please answer the following questions - there are 140 questions and you have 45 minutes. After 45 minutes the test will stop.

Grammar and Vocabulary

Question 1

I have been a pilot _____ 1999.

○ since
○ from
○ during
○ until

Question 2

We may have some turbulence _____ the flight.

○ during
○ at
○ while
○ on

Question 3

We landed _____ Heathrow at 1610.

○ at
○ from
○ in
○ on

Question 4

I _____ like to be a supervisor in the future.

○ would
○ want to
○ am
○ could

Question 5

Resources:

The following resources are available to students:

• **Aviation wordbook** – 2000 of the most important words needed for ICAO language proficiency. Each word is combined with a sentence putting it in context. Students can search for words by topic, by grammar point, and alphabetically. Students can listen to all the words and sentences in both British and American accents.

RUNWAY – The runway at Plymouth airport is only 2000 metres long.

click to play

• **My personal aviation wordbook** – students can save words / sentences into their **personal** wordbook. They can edit the sentences, for example translating them into their own language, and 5 different exercise-types can be created automatically to help the student remember the words.

• **Dictionary** – students can check the meaning of words in the dictionary and hear the pronunciation using the Speaking Pilot feature.

• **My personal dictionary** – all words that students check are saved into their **personal** dictionary. They can edit the sentences, for example translating them into their own language, and exercises are created automatically to help the student remember the words.

• **Aviation Grammar Reference Book** – all of the 49 grammar points taught in the curriculum are explained in the Aviation Grammar Book using only aviation language.

• **Pronunciation Training** – a dynamic training program that uses the latest in speech recognition technology to help students improve their pronunciation. The pronunciation training begins with an assessment. Students can choose to work through the pronunciation training curriculum systematically or use the "Intelligent Tutor" to prioritise the areas on which the student should concentrate. So for example, a student may not need very much practice in saying the "w" "v" sounds, but a lot of practice in saying the "j" "y" sounds.

• **Speaking Professor** – This tool converts the written word into sound. It is even possible to select a male or female voice, British or American accent. This tool is an excellent way for learner's to read and listen simultaneously.

Climb Level 4

[Log out]

say-it   write-it

Climb Level 4 creates a easy to use personalised training programme to prepare you to meet ICAO language proficiency standards and is available at any time wherever you are.

Modules

1 - Time, duration, schedules & fuel

2 - Health

3 - People

4 - Weather

5 - Technology

6 - Aerodromes

7 - Cargo, materials & fire

8 - Communic...

9 - Navigation... ...ght & geography

My Training Resources

My Pronunciation Training
• British English
• American English

Aviation Word Book

My Dictionary

My Aviation Grammar

My Tools

• System Manager
• ICAO language descriptors
• My Configuration
• My Results
• My News
• Help tutorials

Curriculum:

The curriculum is organised into 9 Modules comprising language that Eurocontrol identified as critical in pilot-controller communication (ICAO document 9835 "Manual on the implementation of the ICAO language proficiency requirements, Appendix B-10):

1. Time, duration, schedules and fuel
2. Health
3. People
4. Weather
5. Technology
6. Aerodromes
7. Cargo, materials and fire
8. Communication
9. Navigation, movement and geography

Each of these modules is divided into 3 units (approx. 3-4 hours each). Each unit contains 4 parts:

a) Grammar exercises
b) Vocabulary exercises
c) Listening exercises
d) Fluency / Interactions exercises

The modules have been designed to reinforce each of the ICAO skills taught. For example, the listening comprehension exercises contain words taught in the vocabulary sections; and the emergencies that the student must resolve in the fluency and interactions sections are similar to those in the listening comprehension.

Climb Level 4

[Log out]   say-it   write-it

2 Health

Select a module

Unit A		Total
Grammar		84%
Listening		97%
Vocabulary		70%
Fluency & Interactions		9%

Unit B		Total
Grammar		10%
Listening		97%
Vocabulary		69%
Fluency & Interactions		0%

Unit C		Total
Grammar		22%
Listening		96%
Vocabulary		70%

Item	Activity Name	Score
1	Introduction: Pronouns 1	-
2	Interrogative pronouns: Overview	✔
3	Interrogative pronouns 1a	95%
4	Interrogative pronouns 1b	100%
5	Interrogative pronouns 2a	100%
6	Interrogative pronouns 2b	100%
7	Interrogative pronouns 3	30%
8	Reflexive pronouns: Overview	-
9	Reflexive pronouns 1	100%
10	Reflexive pronouns 2	40%
11	Reflexive pronouns 3	100%
12	Indefinite pronouns: Overview	-
13	Indefinite pronouns 1a	60%
14	Indefinite pronouns 2a	100%
15	Indefinite pronouns 2b	100%

Grammar:

The grammar content of CL4 is based on a needs analysis of the grammatical points required to reach ICAO level 4 and above. The ICAO descriptors for grammar level 4 say:

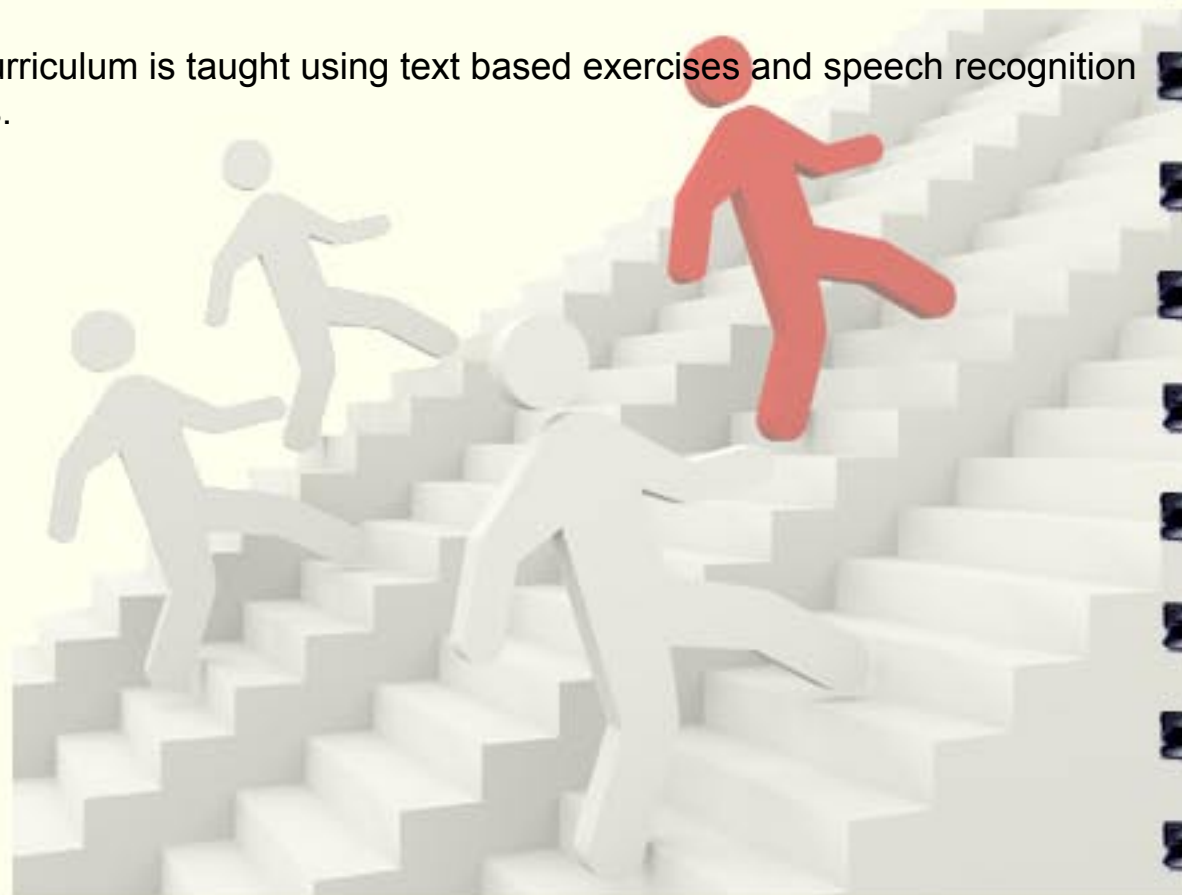"*Basic grammatical structures and sentence patterns are used creatively and are usually well controlled.*"

At level 5:

"*Basic grammatical structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning.*"

Climb level 4 gives students extensive practice in both the basic and more complex grammatical structures of the English language. The authors have selected the 49 most important structures and tenses needed to reach ICAO language proficiency.

The grammar exercises are accompanied by a grammar reference book. The exercises are designed to improve students understanding of the form and meaning of a range of structures and tenses; they contain extensive practice in the syntactic features of all the structures taught.

The grammar curriculum is taught using text based exercises and speech recognition based exercises.

Vocabulary:

The vocabulary curriculum covers the 9 areas noted in the attached document "**CL4 - vocabulary outline**".

The vocabulary curriculum has been designed to help students with word recognition and production, the use of words in context and the correct production of words.
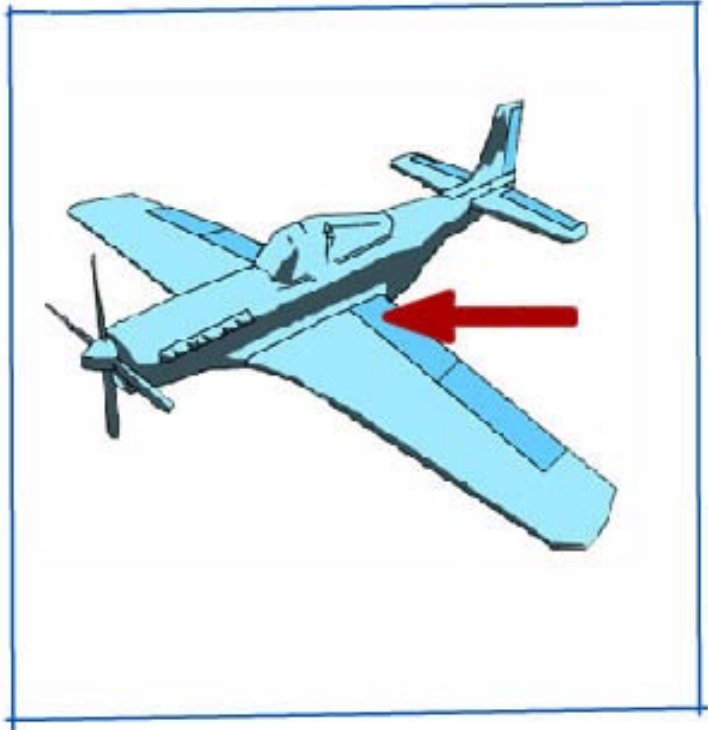
The curriculum is designed so that the lexical items taught are revised several times over to aid language retention. The exercises have been designed to appeal to students with a variety of learning styles.

Language is presented aurally, in text and pictorial form. Students are able to save words they want to revise in the Aviation Word Book. They can translate them into their first language, and annotate the example sentences and definitions.
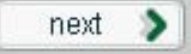
Screen shot of example vocabulary exercise

To match the word with the picture, click the record button and speak your answer.

aileron
cockpit
elevator
engine
flap
fuselage
propeller
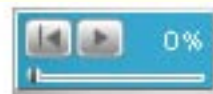rudder
spinner
tail

student SPEAKS the correct answer

next ▶

Comprehension:

ICAO level 4 requires students to comprehend both routine and non-routine situations. Climb Level 4 provides extensive practice in listening to pilot-controller communications. These have been written by aviation personnel who also have a teaching background and reflect the reality of controlling several aircraft in the same airspace. The listening comprehension texts reflect realistic problems and emergencies. The curriculum also includes aviation news stories and "Flight School" programs which look at best practice in improving aviation safety. The comprehension curriculum includes:

• a wide variety of international accents
• concept checking exercises
• the target vocabulary and grammar taught in the curriculum

Screen shot of example comprehension exercise

Listen to these dialogues between pilots and controllers and put the sentences in the correct order:

1	☐	☐	Varig 231 requests to maintain its current flight level due to weather conditions.
2	☐	☐	Varig 231 is given descent for its destination, Nairobi.
3	☐	☐	Varig 231 requests to hold and asks for latest weather for Mombasa.
4	☐	☐	Varig 231 is positioned number four for the approach, and requests priority landing.
5	☐	☐	Nairobi control gives descent and Varig 231 is handed over to approach control.
6	☐	☐	The pilot requests weather information for Nairobi.
7	☐	☐	Fuel endurance is too low for an alternate, and the pilot requests descent for Nairobi.
8	☐	☐	Control reports it is overcast at 500 feet with visibility of 1200 metres.

Fluency / Interactions:

ICAO level 4 and above requires students to "produce stretches of language at an appropriate tempo", and to give "immediate, appropriate and informative" responses to messages. Personnel are also required to deal with misunderstandings by "checking, confirming and clarifying".

Climb Level 4 has a variety of exercise types to help students improve their fluency and interactions. One major cause of disfluency is pausing to access grammar or vocabulary and so many of the fluency exercises within each module are based on the grammar and vocabulary that is taught in that module. The exercises move from controlled production to freer production. For example, students

• Listen to a short paragraph about how to deal with a certain emergency situation
• Read that paragraph fluently (controlled production)
• Listen to an ATCO giving instructions in an emergency
• Then take the role of that ATCO and give the same instructions fluently (controlled production)
• Then, in their own words, talk fluently about their own experience of emergency situations (free production)

In each of the exercises, the student is given feedback about their pausing and rate of speech.

Climb level 4 also provides extensive practice in recognising and resolving misunderstandings. There are lots of interactive exercises where the student has to take the role of an ATCO talking to a pilot. If the pilot misunderstands ATC instructions, the student has to correct the misunderstanding. These exercises again have been written by aviation personnel and cover the most common causes of misunderstandings, such as incorrect readback, level busts, confusion about altimeter pressure settings etc.

The fluency and interactions curricula also contain a wide variety of international accents.

Results & Tracking Data:

Students are able to see:

- Date and time of connections to the programme
- Duration of each session
- Total time spent using the programme
- Results for each exercises
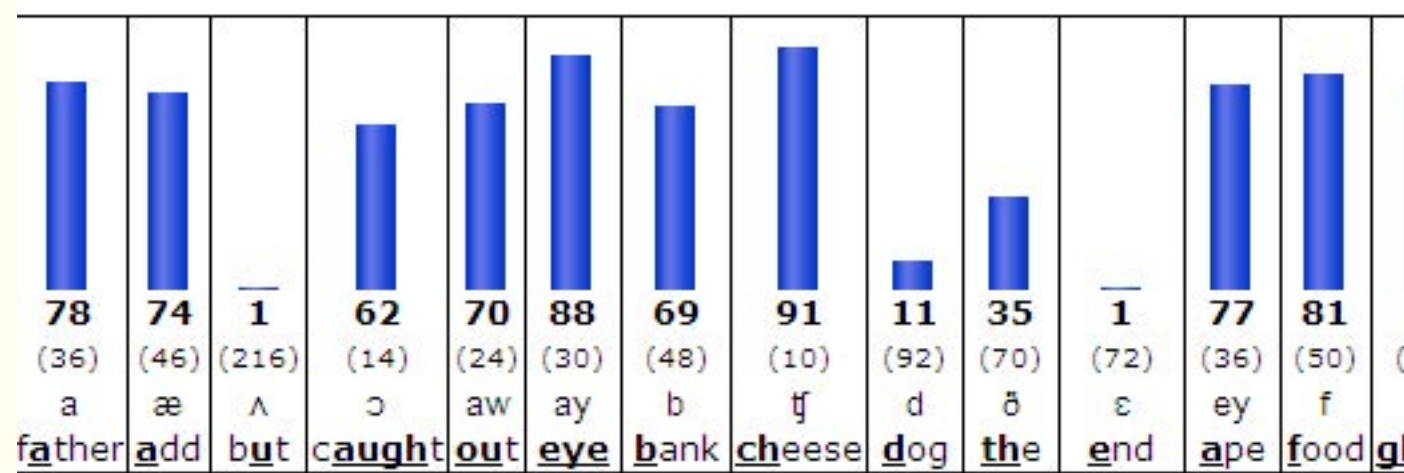- Results for each unit
- Results for each module

This information can also be made available to the administration of Critical National Infrastructure Agency through the use of an "administrator's" password (data both by individual students and / or by group of students).

All this data can be printed and / or exported in "csv" format (to Excel, for example).

Climb Level 4

Sessions Results

Laura Dickey, you have connected 148 times, called 266 exercises and connected for 53:11:05

Date	Time	Call	Duration hh:mm:ss
21/07/2008	12:51	session	00:05:28
24/07/2008	16:49	session	02:26:02
24/07/2008	18:19	session	00:01:30
24/07/2008	18:20	session	00:02:05
30/07/2008	14:20	session	03:06:25
05/08/2008	19:31	session	00:01:54
05/08/2008	19:46	session	03:11:59
13/08/2008	12:54	session	00:01:30
13/08/2008	15:14	session	00:01:30

% = score   X = incorrect   ? = hints   Ø = not answered

Date	Time	Call	Title	Type	Duration mm:ss	%	X	?	Ø
21/07/2008	12:55	result	Health - problems	custvocabdef	01:15	100	0	0	0
/2008	12:57	result	Hospital vocabulary 2	custvocabdef	00:05	0	0	0	100
24/07/2008	16:49	result	GA Recommending 2	custsentconv	00:01	0	0	0	100
/2008	16:50	result	GA Quantifiers - enough, too 1	custsentconv	144:49	40	0	0	60
30/07/2008	14:52	result	Human skeleton	custvocabdef	00:04	0	0	0	100
/2008	19:32	result	CAN6f In-flight Health 3	custgapdrag	00:34	0	0	0	100
05/08/2008	19:33	result	CAN6 In-flight Health 4	custslideshow	00:01	0	0	0	100
/2008	19:47	result	GA Recommending 2	custsentconv	36:08	10	0	0	90
05/08/2008	20:24	result	GA Demonstratives	custmulti	01:11	82	0	18	0
/2008	20:25	result	GA Demonstratives - one/ones	custmulti	00:01	0	0	0	100
05/08/2008	20:25	result	GA Distributives	custmulti	00:02	0	0	0	100
/2008	20:25	result	CS Verb Forms: Each and Every 1	custsentconv	00:01	0	0	0	100
/2008	20:25	result	CS Verb Forms: Each and Every 2	custsentconv	00:01	0	0	0	100

Key

Skill Level after Assessment on Thursday, 6 November 2008, 02:02 PM

The bar and bold number indicate Probability of Correct Pronunciation (The number in parentheses indicates Number of Samples)

78	74	1	62	70	88	69	91	11	35	1	77	81	
(36)	(46)	(216)	(14)	(24)	(30)	(48)	(10)	(92)	(70)	(72)	(36)	(50)	(
a	æ	ʌ	ɔ	aw	ay	b	ʧ	d	ð	ɛ	ey	f	
father	add	but	caught	out	eye	bank	cheese	dog	the	end	ape	food	gh

Technical requirements:

Generally speaking, if your computer is relatively new then you should have no problems using Climb Level 4 .

Web browsers
• Microsoft Internet Explorer, versions 6 or higher
• Opera, versions 8 or higher
• Mozilla Firefox 2 or higher

Plug-ins
• Macromedia Flash Player 6 or higher
(a free download at
www.adobe.com/products/flashplayer/)

Internet Connection (check your speed at
www.speedtest.org)
• Minimum: 300kb / second
• Ideal: 1mb / second

Sound
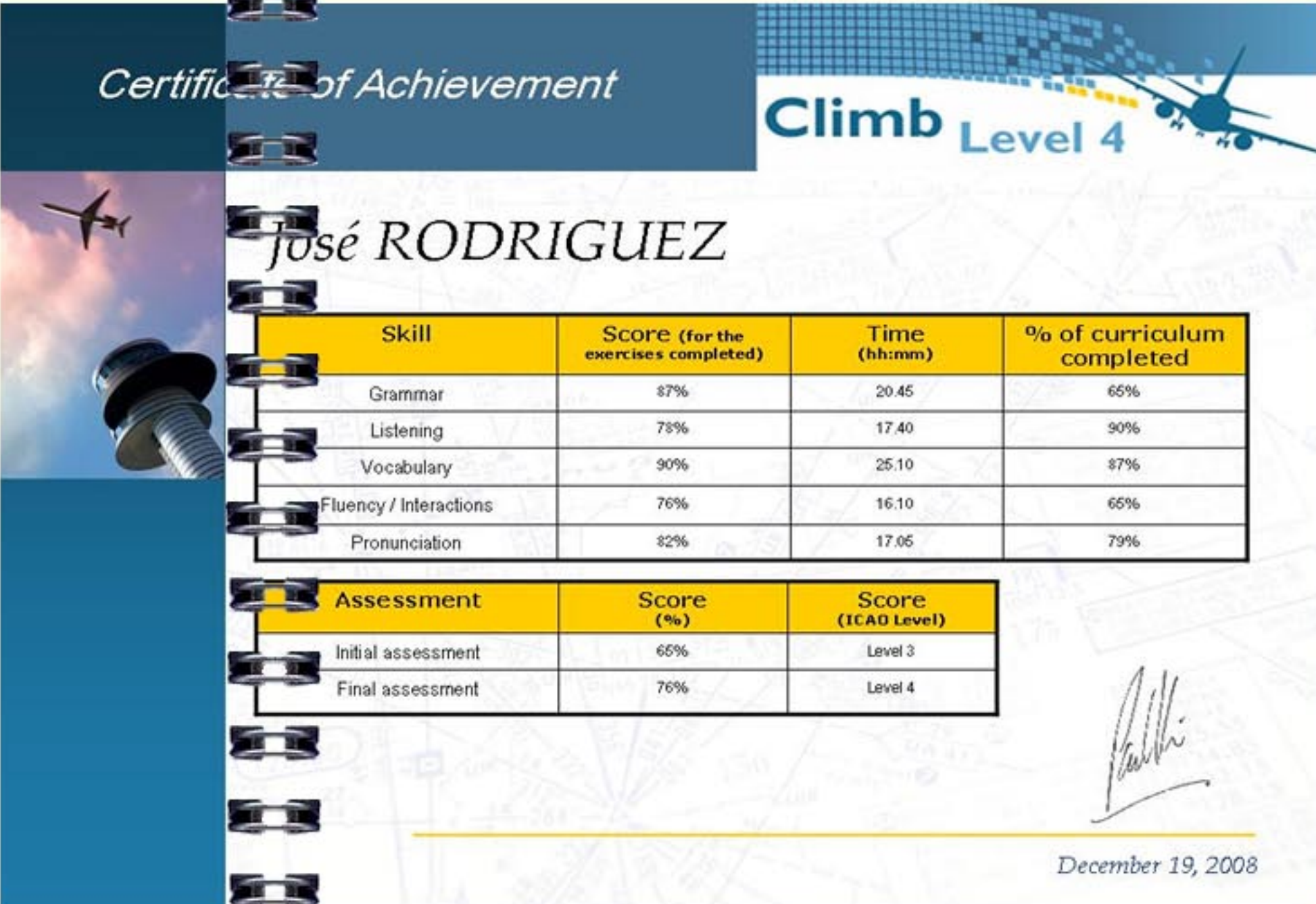• 16 bit Sound Card
• Headset with microphone

Screen
• Resolution: minimum 1024 x 768
• Colours: minimum 16 bit-Density

CL4 Certificate:

At the end of the course each student receives an electronic certificate which summarises the results and the time spent using Climb Level 4.

Certificate of Achievement

Climb Level 4

José RODRIGUEZ

Skill	Score (for the exercises completed)	Time (hh:mm)	% of curriculum completed
Grammar	87%	20.45	65%
Listening	78%	17.40	90%
Vocabulary	90%	25.10	87%
Fluency / Interactions	76%	16.10	65%
Pronunciation	82%	17.05	79%

Assessment	Score (%)	Score (ICAO Level)
Initial assessment	65%	Level 3
Final assessment	76%	Level 4

December 19, 2008

Pricing:

Programs

CL4 Shuttle:
This program lasts for 5 hours (spread over a 1-week period) and includes one initial assessment and then access to the training program.

CL4 Short-Haul:
This program lasts for 100 hours spread over a 3-month period - this means an average commitment of about 8 hours per week.
CL4 Short-Haul includes the personal training program and two assessments: one at the beginning and another to check progress at the end.

CL4 Long-Haul:
This program lasts for 100 hours spread over a 6-month period - this means an average commitment of about 4 hours per week.
CL4 Long-Haul includes the personal training program and two assessments: one at the beginning and another to check progress at the end.

Prices for Critical National Infrastructure Agency

Cost per person (US$)	Number of Persons					
	1-24	25-49	50-99	100-249	250-499	500+
CL4 Shuttle	$50	$50	$50	$48	$45	$43
CL4 Short-Haul:	$395	$375	$356	$336	$316	$296
CL4 Long-Haul:	$545	$518	$491	$463	$436	$409

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