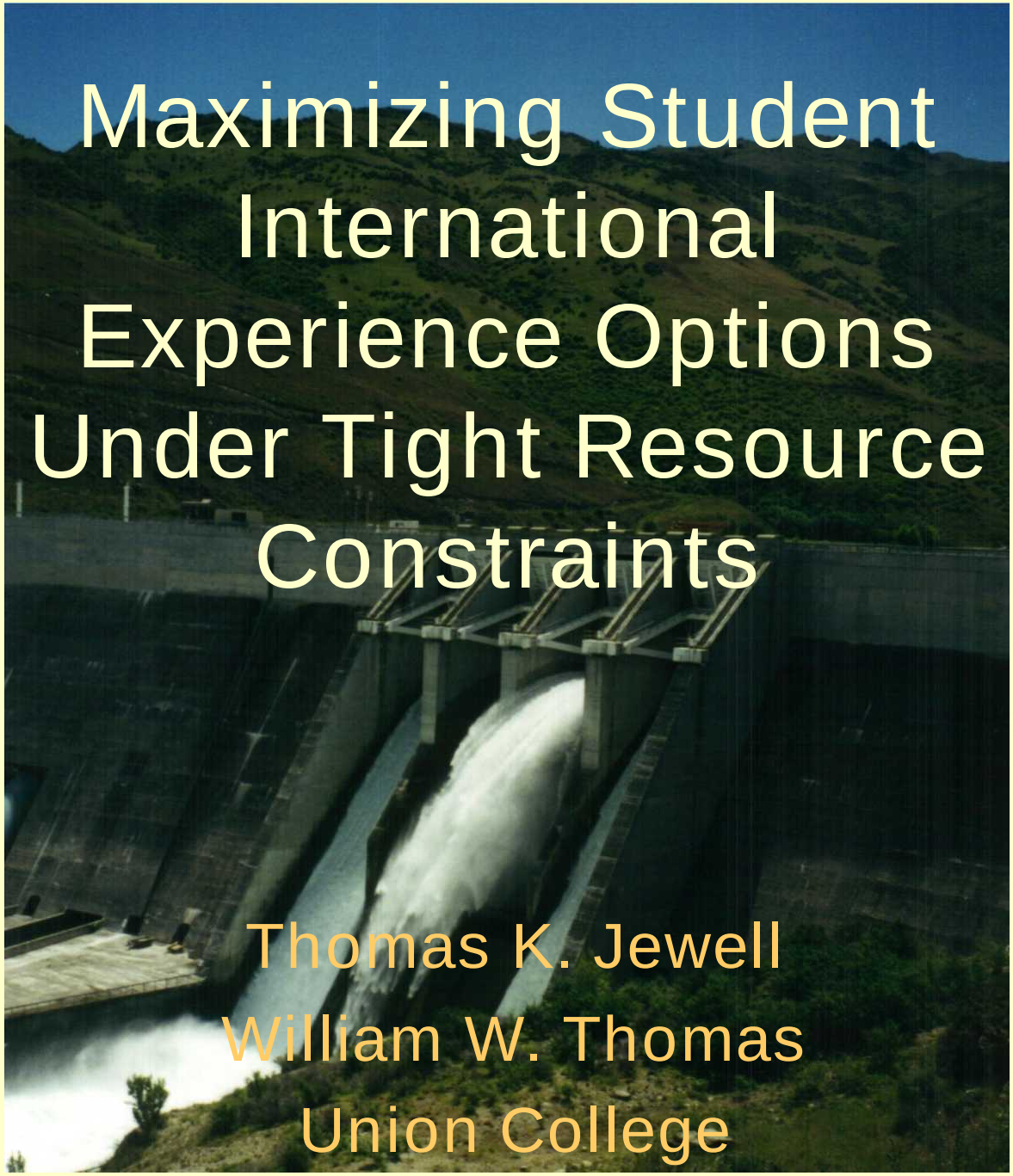


Maximizing Student International Experience Options Under Tight Resource Constraints

Thomas K. Jewell
William W. Thomas
Union College

Union College

- Founded 1795
- Schenectady, NY
- First Liberal Arts College with Engineering (1845)
- Squire Whipple
- Charles Proteus Steinmetz

General Education Requirements

- Modern Languages
- Cultural Diversity
- International Experiences

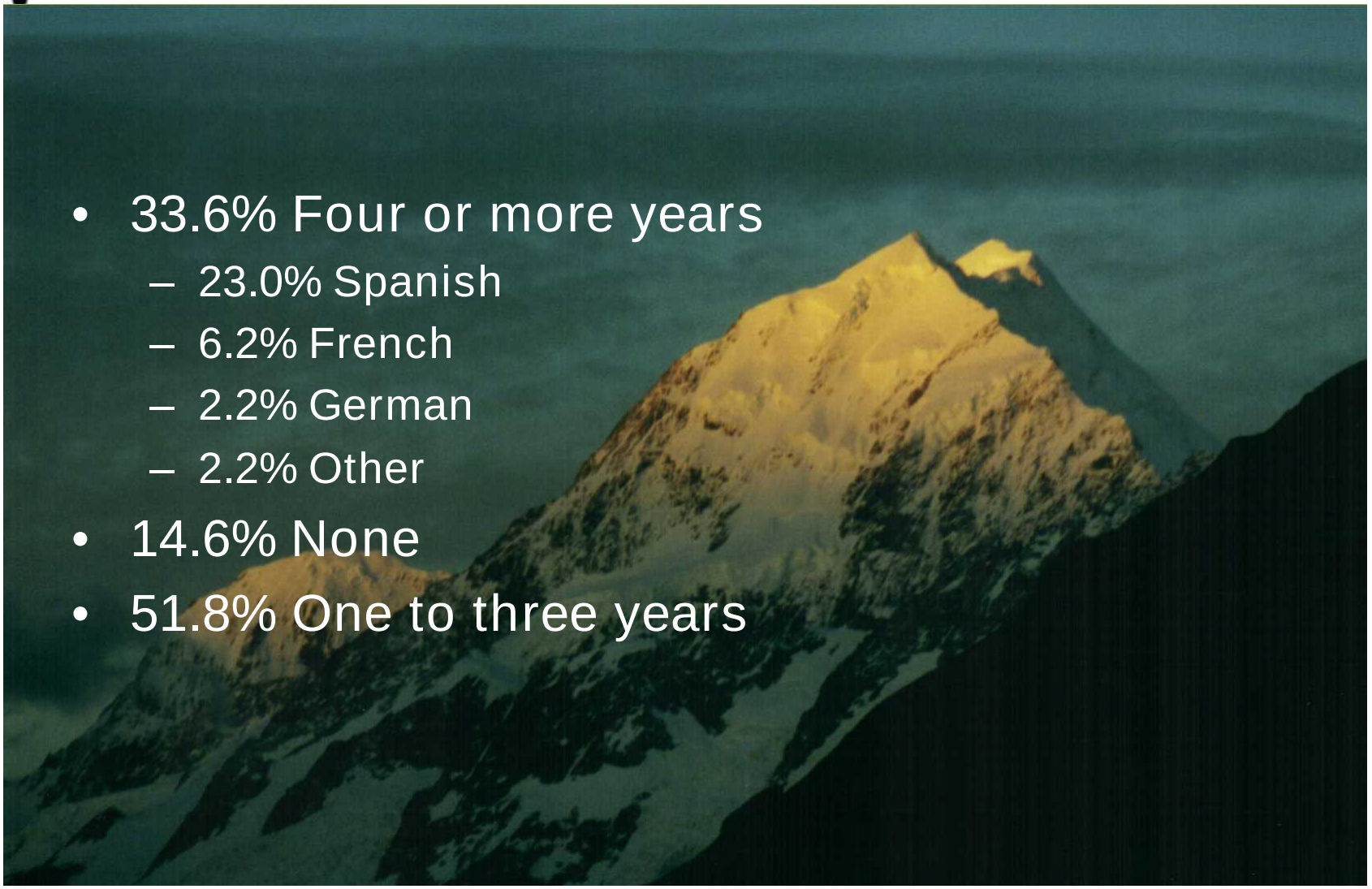
Options Requiring International Travel

- Conventional Union Term Abroad
- International Engineering Exchanges
- Mini Term Abroad (3 weeks)
- International Virtual Term Aboard
- International Internships and Co-ops

Engineering Students' International Experiences

Type of Experience	2004	Five Year Average
Regular Term Abroad	13%	19.7%
Exchange	39%	31.1%
Mini-term	28%	31.5%
IVDS	2%	4.2%
International Term in Industry		1.2%
Other (Not involving international travel)	18%	12.3%

Language Preparation

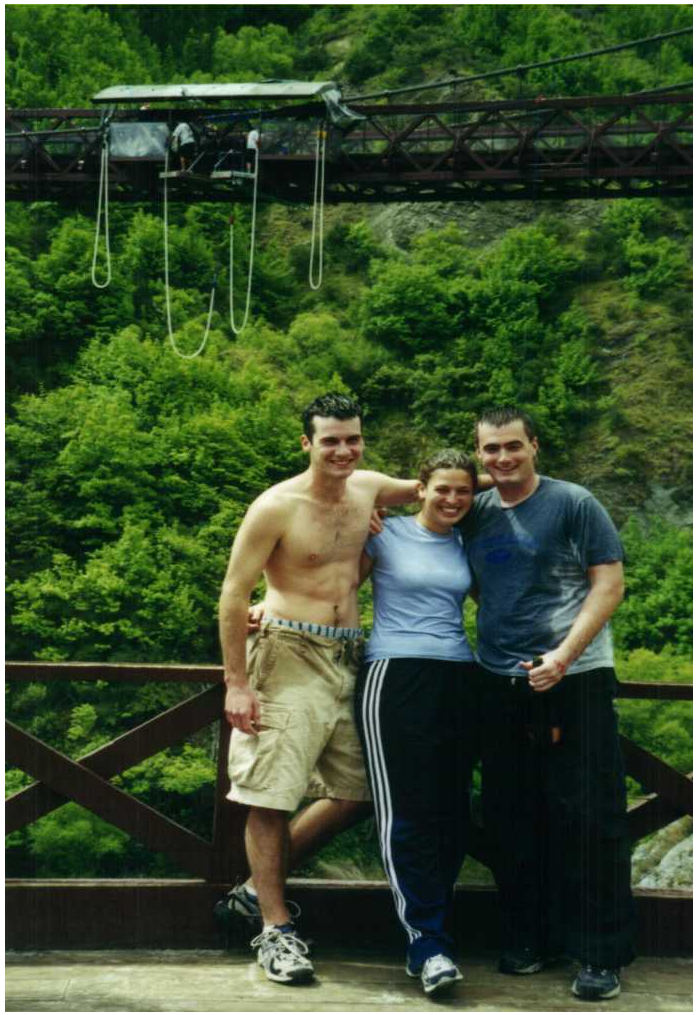


- 33.6% Four or more years
  - 23.0% Spanish
  - 6.2% French
  - 2.2% German
  - 2.2% Other
- 14.6% None
- 51.8% One to three years

Relative Costs for Programs

Type of Experience	Duration (weeks)	Cost/Student	Cost/Student /Week
Regular Term Abroad	10	$8679	$868
Mini-term	3	$3750	$1250
Exchanges	10	$1840	$184
IVDS Internet Projects	1	$1440	$1440
International Internship in Industry	10	$7000	$700

Net Benefits



Regular Term Abroad

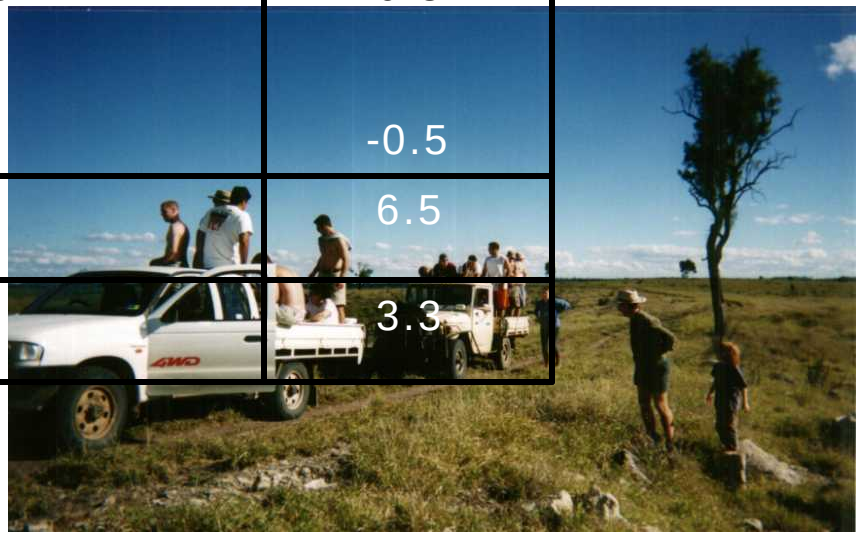
Regular Term Abroad	Weighting
Benefits • Length of stay • Language proficiency • Cultural immersion • Support group Disbenefits • No engineering courses	 1.0 3.0 0.5 0.2 -0.5
Net Benefits (with language)	4.2
Net Benefits (without language)	1.2

Mini-term

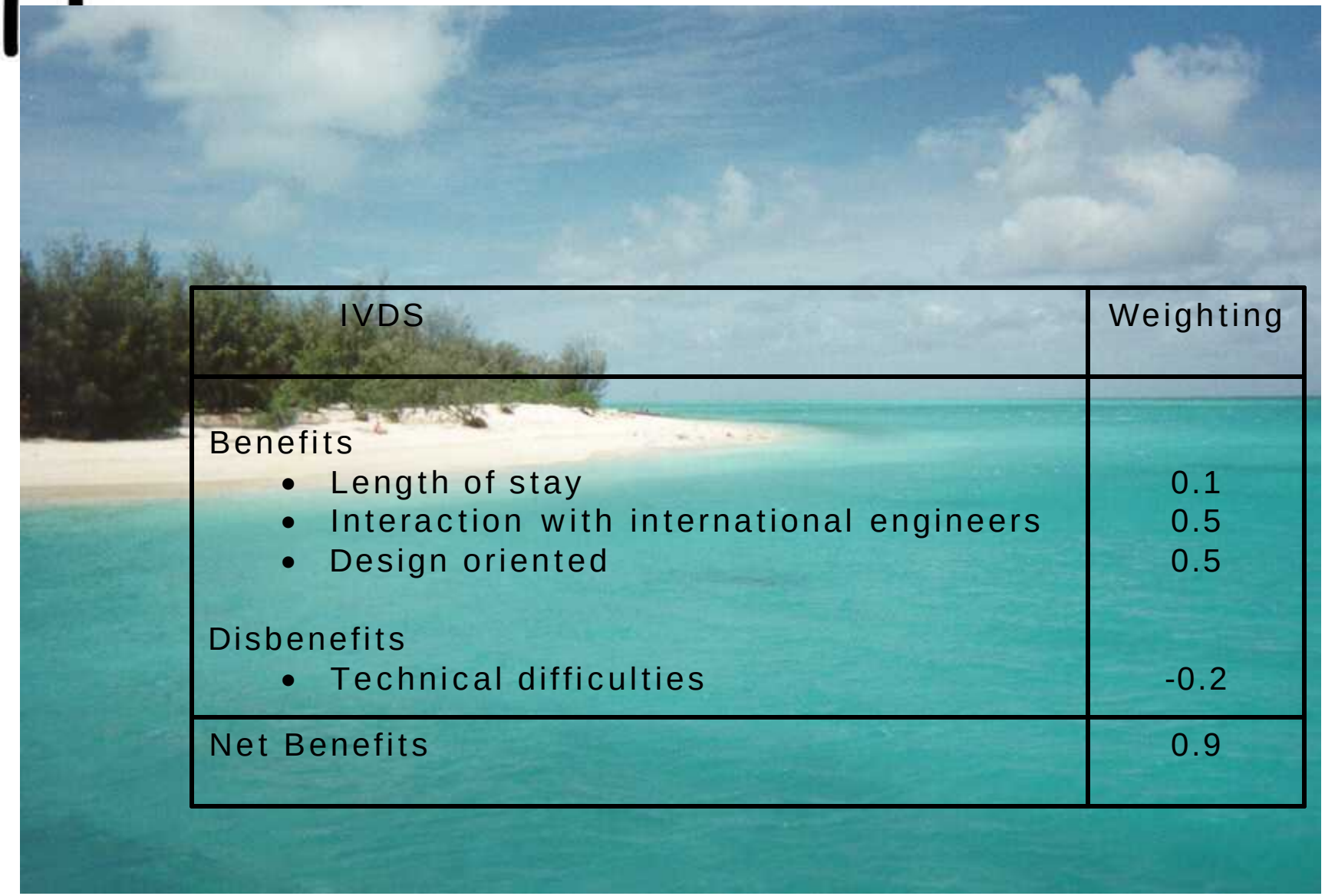
Mini-term	Weighting
Benefits	
• Length of stay	0.3
• Doesn't interfere with regular classes	0.3
• Interdisciplinary	0.4
• Interaction with international engineers	0.2
Net Benefits	1.2

Engineering Exchanges

Engineering Exchanges	Weighting
Benefits	
• Length of stay	1.0
• Engineering classes	0.5
• Interaction with international engineers	1.0
• Cultural immersion	1.0
• Language proficiency	3.2
• International engineers at Union	0.3
Disbenefits	
• Lack of support group	-0.5
Net Benefits (with language)	6.5
Net Benefits (without language)	3.3



IVDS



IVDS	Weighting
Benefits	
• Length of stay	0.1
• Interaction with international engineers	0.5
• Design oriented	0.5
Disbenefits	
• Technical difficulties	-0.2
Net Benefits	0.9

International Internship in Industry

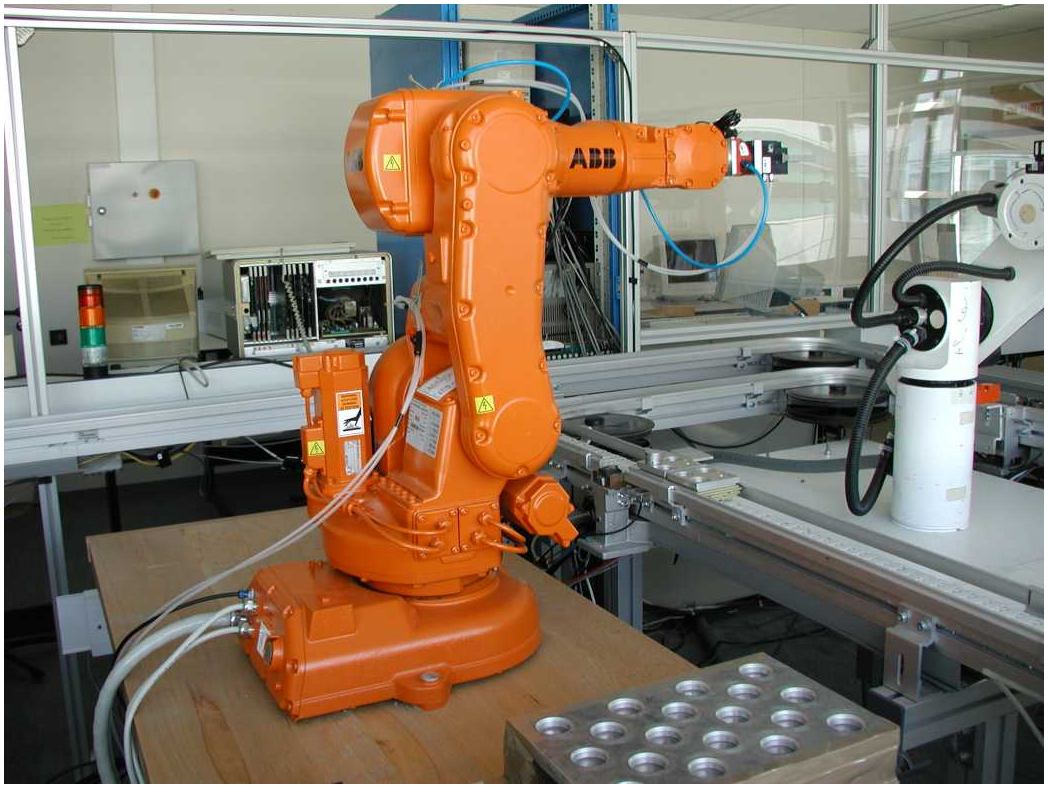
International Internship in Industry	Weighting
Benefits	
• Length of stay	1.0
• Interaction with international engineers	2.0
• Language proficiency	3.2
• Cultural immersion	1.5
Disbenefits	
• No academic credit	-1.0
Net Benefits (with language)	6.7
Net Benefits (without language)	3.5

Ranking of Programs

Program	Cost/Student	Cost/Student/ Week	Net Benefit (w language)	Net Benefit (w/o language)
Regular Term Abroad	5	3	4.2	1.2
Mini-term	3	4	1.2	1.2
Engineering Exchange	2	1	6.5	3.3
IVDS	1	5	0.9	0.9
International Internship in Industry	4	2	6.7	3.5

Future Developments

- International Internships in Industry
- Exchange Programs



Issues Favoring Exchanges

- Strong Engineering Component
- Cultural Immersion
- International Students to Union
- Minimize costs

Types of Exchanges

- One term or semester/whole academic year
- Tuition, room, & board/tuition only
- Exchange + industrial internship
- Shorter term exchanges
  - IVDS
  - Summer programs

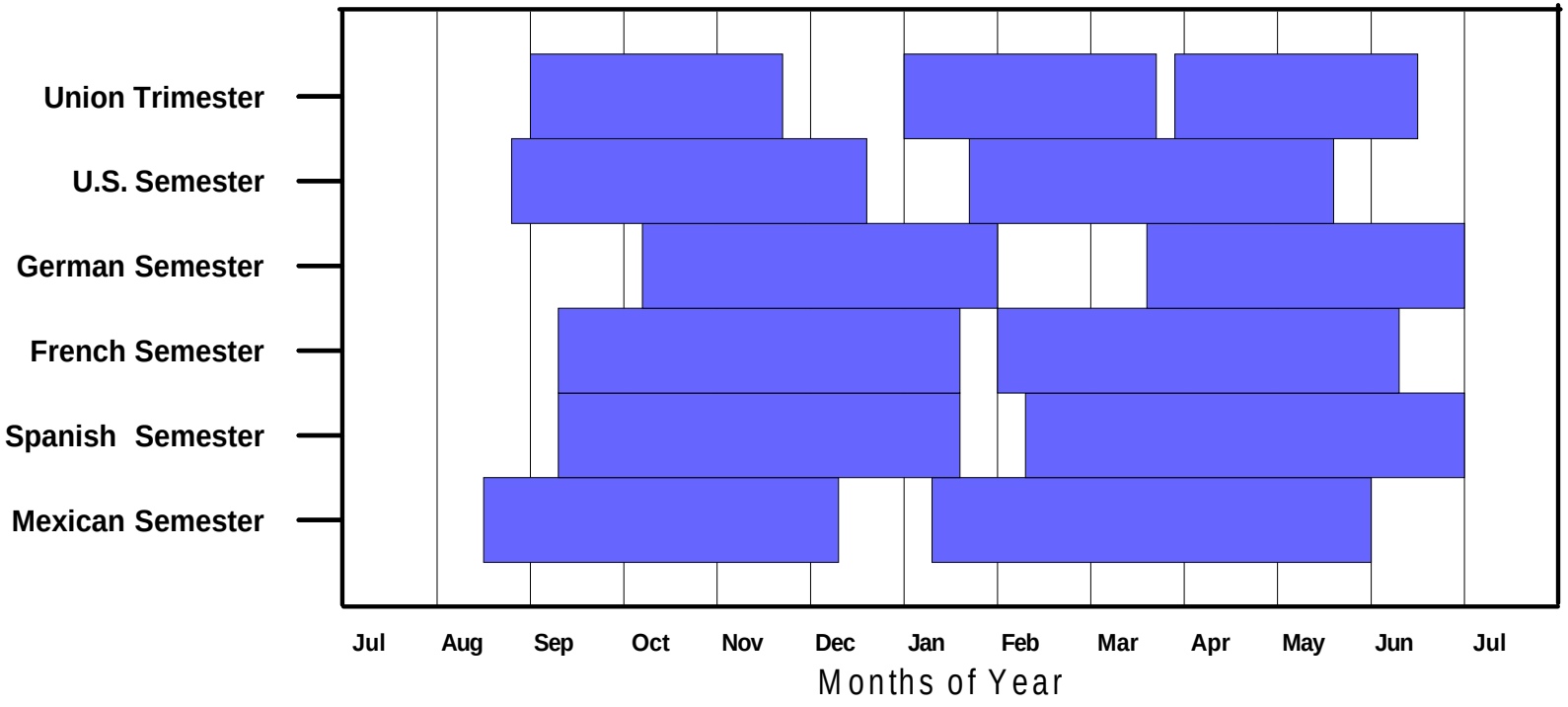
The Road to Developing Exchanges

- Compatible programs
- Formal agreement
- Selling experience to students
- Selecting students
- Support Services

Obstacles to be Overcome

- Language Barriers
- Schedule Differences

Comparative Academic Calendars



Obstacles to be Overcome

- Language Barriers
- Schedule Differences
- Credit Evaluation
- Maintaining Balance
- Visas
- Currency Exchange Rates