

Master of Physics Astronomy & Astrophysics

Information for Students Commencing in 2024

Matthew Young



THE UNIVERSITY OF
**WESTERN
AUSTRALIA**

Our Programme

**Programme
Chair**

Specializations

**Specialization
Coordinators**

Our Programme

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Chair**

Specializations

**Specialization
Coordinators**

Prof Ju Li



Master of Physics

Our Programme

**Programme
Chair**

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Master of Physics

Specializations

Astrophysics

Computational

Experimental

Quantum
Technology & Computing

Medical

Theoretical

**Specialization
Coordinators**

Our Programme

Programme Chair

Prof Ju Li



Master of Physics

Specializations

Astrophysics

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Specialization Coordinators



Matthew Young



Jingbo Wang



Ju Li



Mike Tobar



Pejman
Rowshan Farzad



Darren Grasso

Master of Physics

Astronomy & Astrophysics Specialisation

Webpages

- How to [Study the Master of Physics at UWA](#)
- UWA Handbook Entry - [Master of Physics](#)
- [Specific Information](#) on the Astronomy & Astrophysics specialisation

Master of Physics

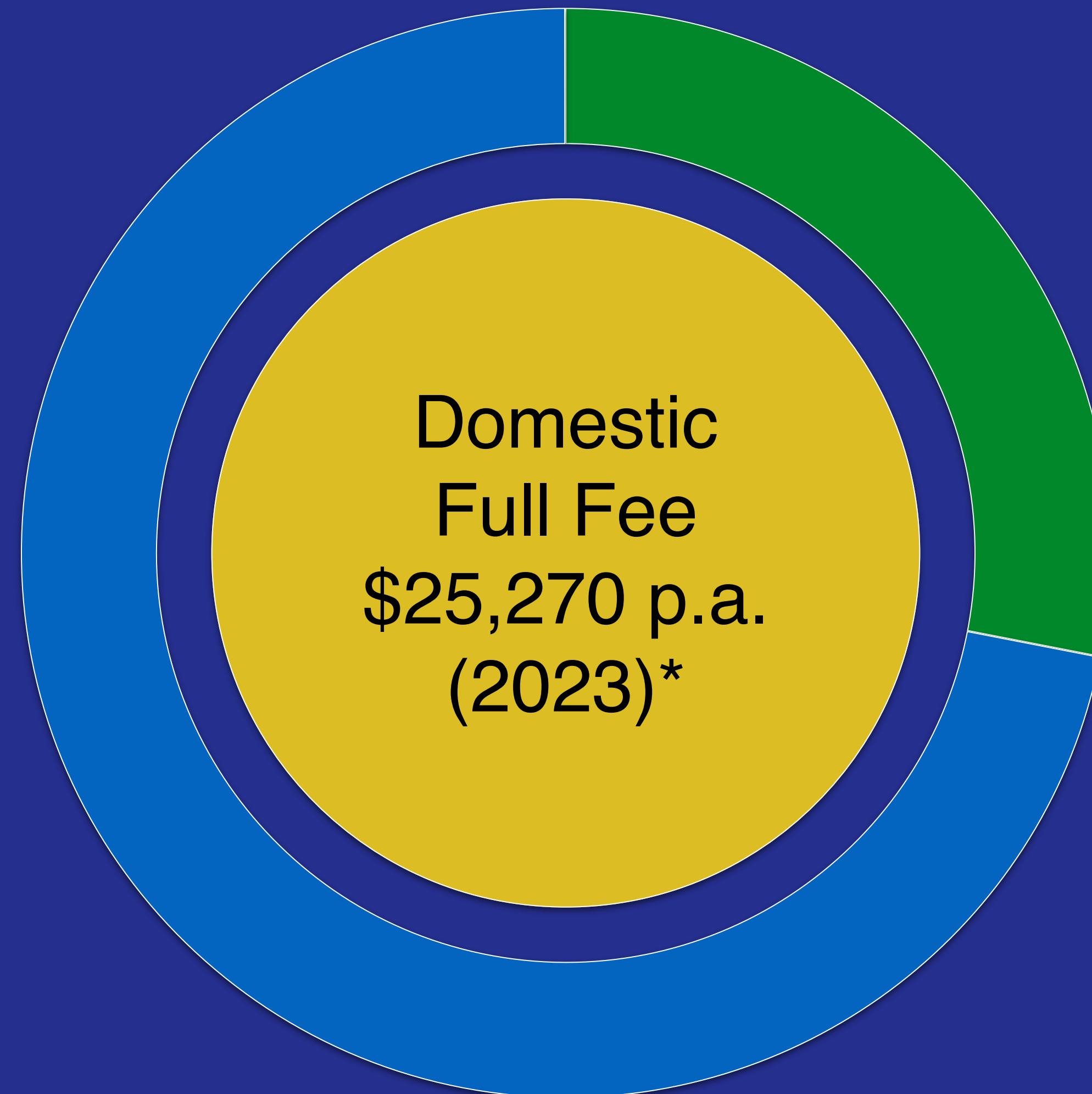
Fees

Master of Physics at UWA has Commonwealth Supported Places (CSP) for Domestic Students.

Master of Physics - Domestic Student Fees

Domestic
Full Fee
\$25,270 p.a.
(2023)*

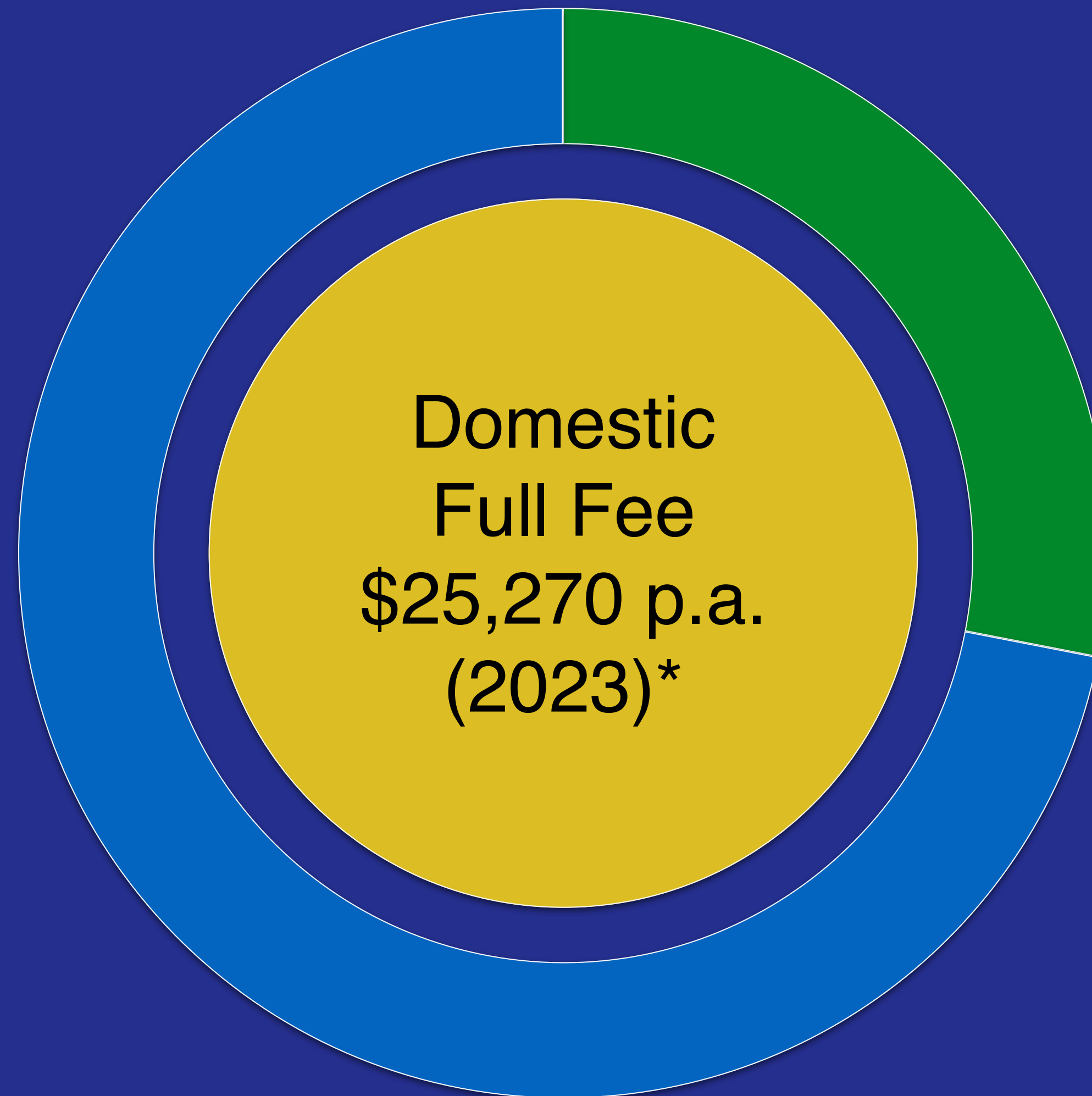
Master of Physics - Domestic Student Fees



* education.gov.au - 2023 Allocation of units of study to funding clusters

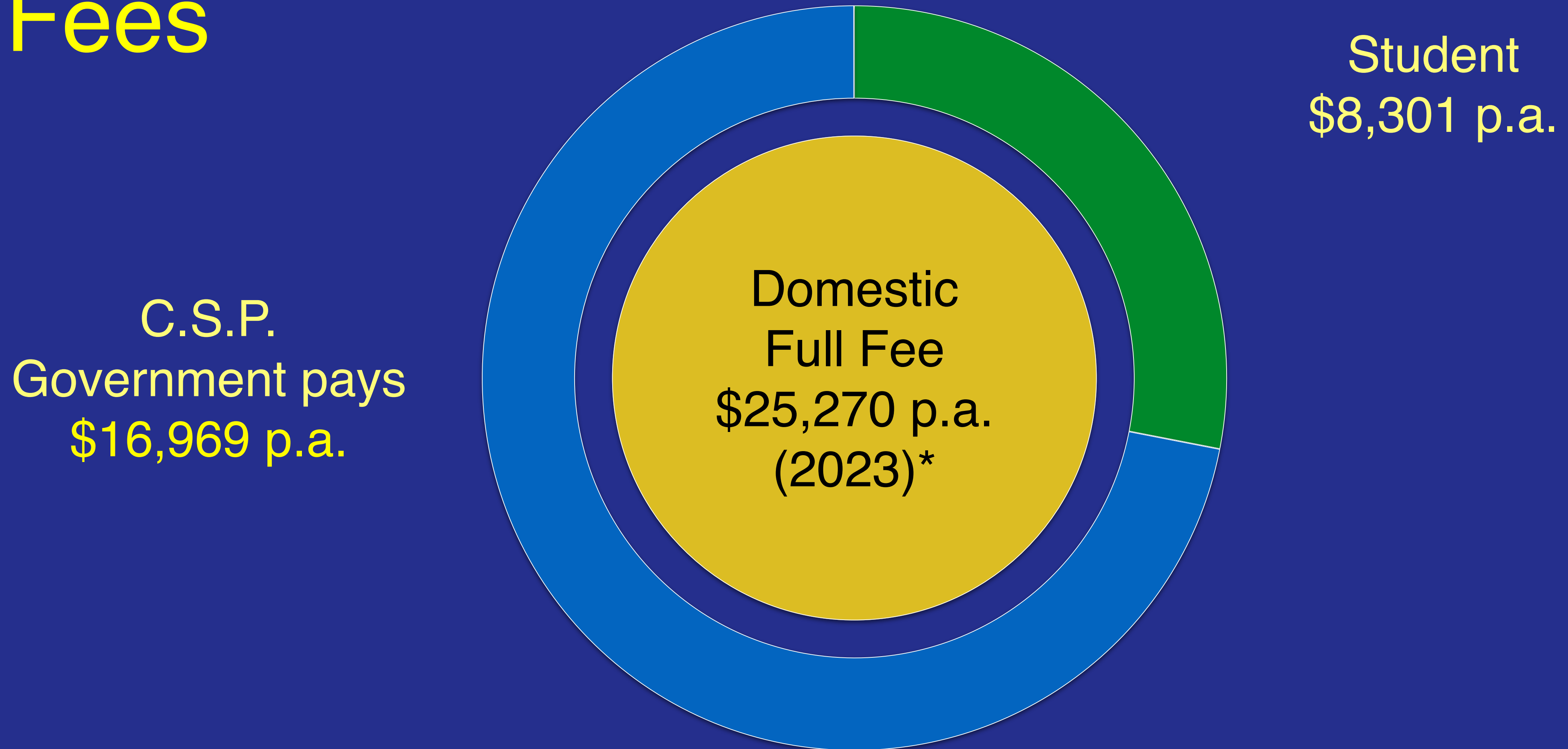
Master of Physics - Domestic Student Fees

C.S.P.
Government pays
\$16,969 p.a.



* education.gov.au - 2023 Allocation of units of study to funding clusters

Master of Physics - Domestic Student Fees



* education.gov.au - 2023 Allocation of units of study to funding clusters

Master of Physics

Fees:

Master of Physics at UWA has Commonwealth Supported Places (CSP) for Domestic Students.

Few Australian Universities have CSPs for Physics/Astrophysics Masters courses!

Master of Physics - International Student Fees



International
\$45,400 p.a.
(2023)

Master of Physics - International Student Fees



International
\$45,400 p.a.
(2023)

Some Scholarships

Master of Physics - Scholarships

Master of Physics - Scholarships

Examples:

Master of Physics - Scholarships

Examples:

Master of Physics - Scholarships

Examples:

- Muriel & Colin Ramm Postgraduate [Scholarship in Physics](#)

Master of Physics - Scholarships

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- Global Excellence [Scholarships](#)

Master of Physics - Scholarships

Examples:

- Muriel & Colin Ramm Postgraduate [Scholarship in Physics](#)
- Global Excellence [Scholarships](#)
- Search [UWA Fees & Scholarships](#)

Structure

Structure

Year 1

Semester 1

Semester 2

Year 2

Semester 3

Semester 4

Structure

Year X

Semester 1

Semester 2



Structure

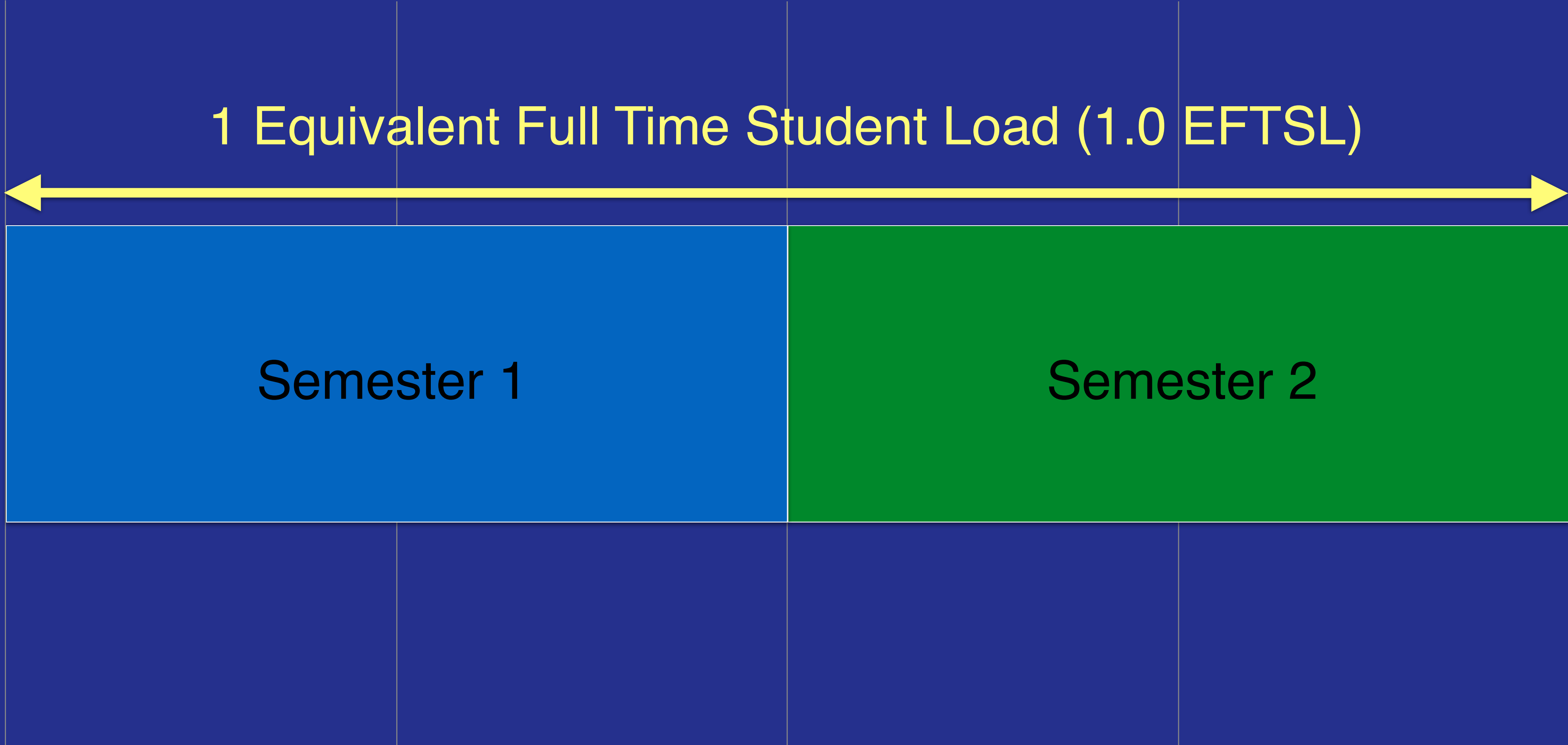
1 Equivalent Full Time Student Load (1.0 EFTSL)



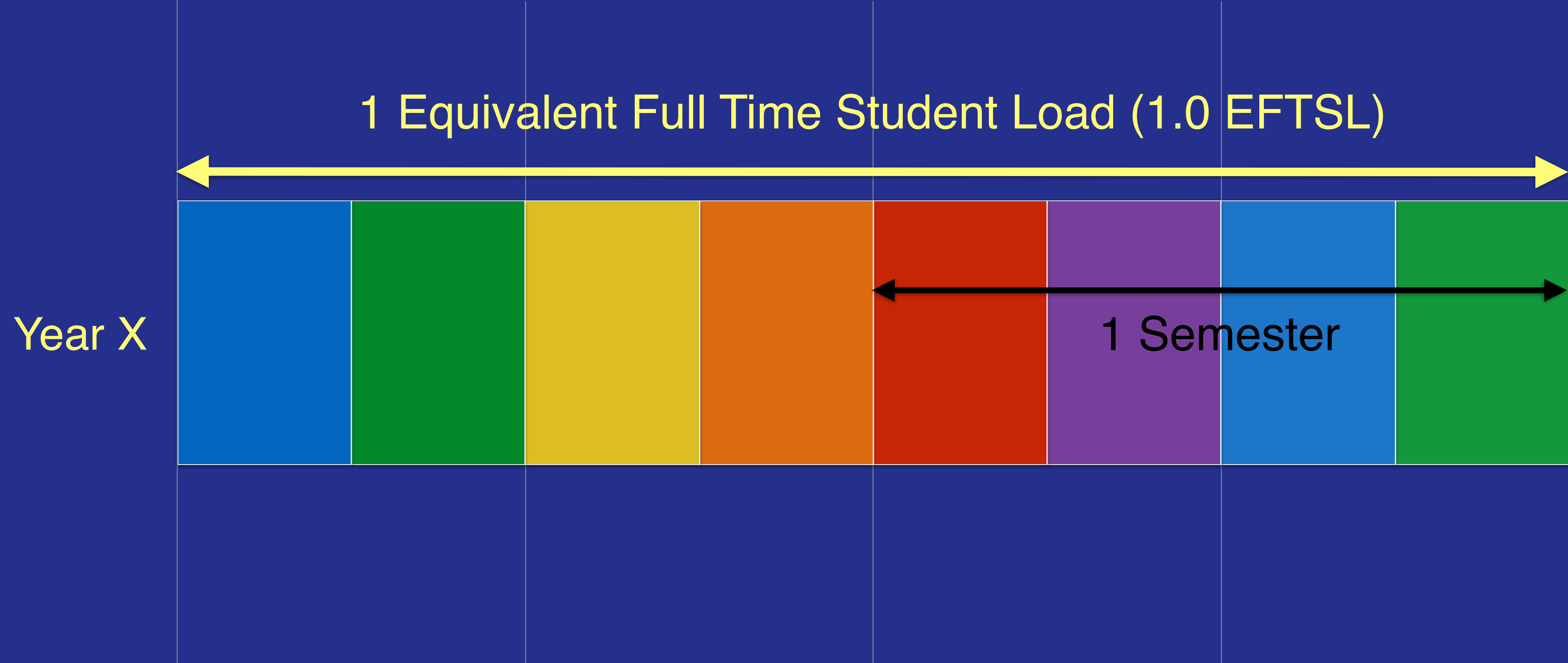
Year X

Semester 1

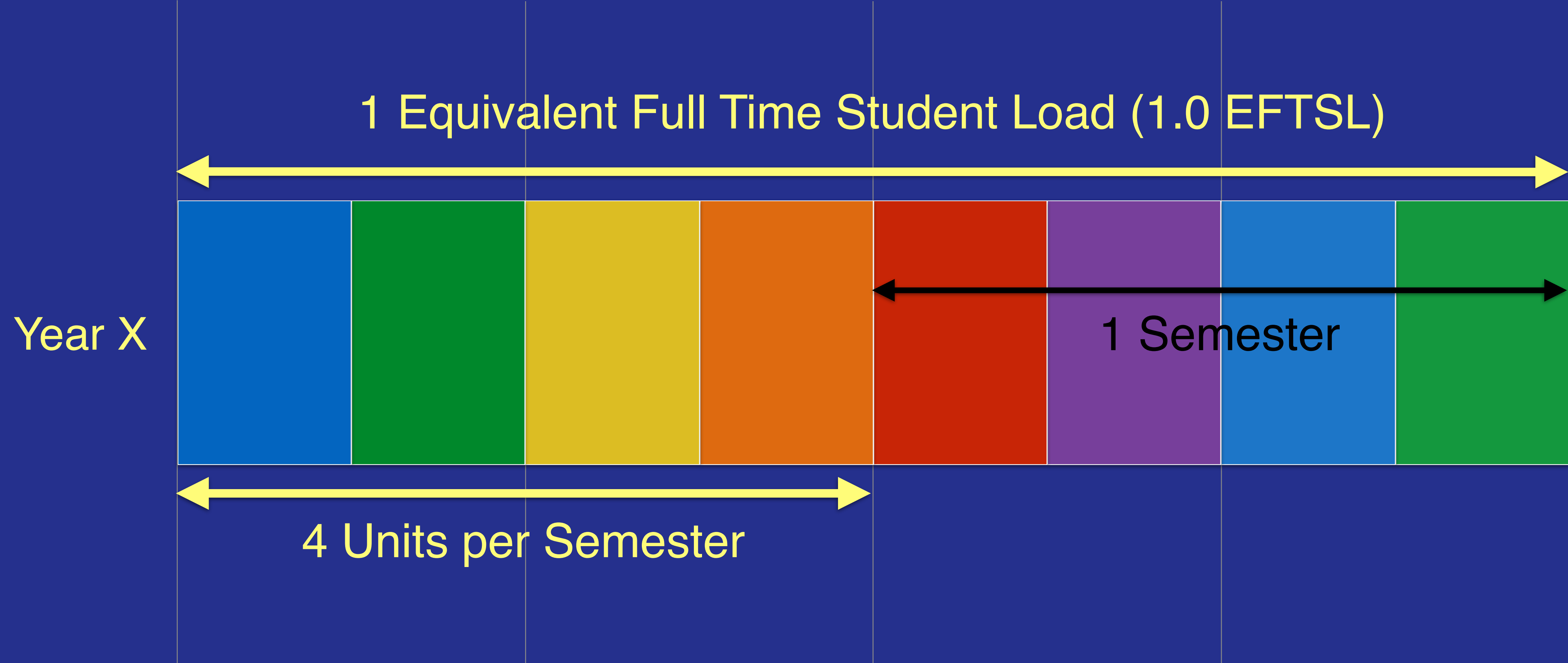
Semester 2



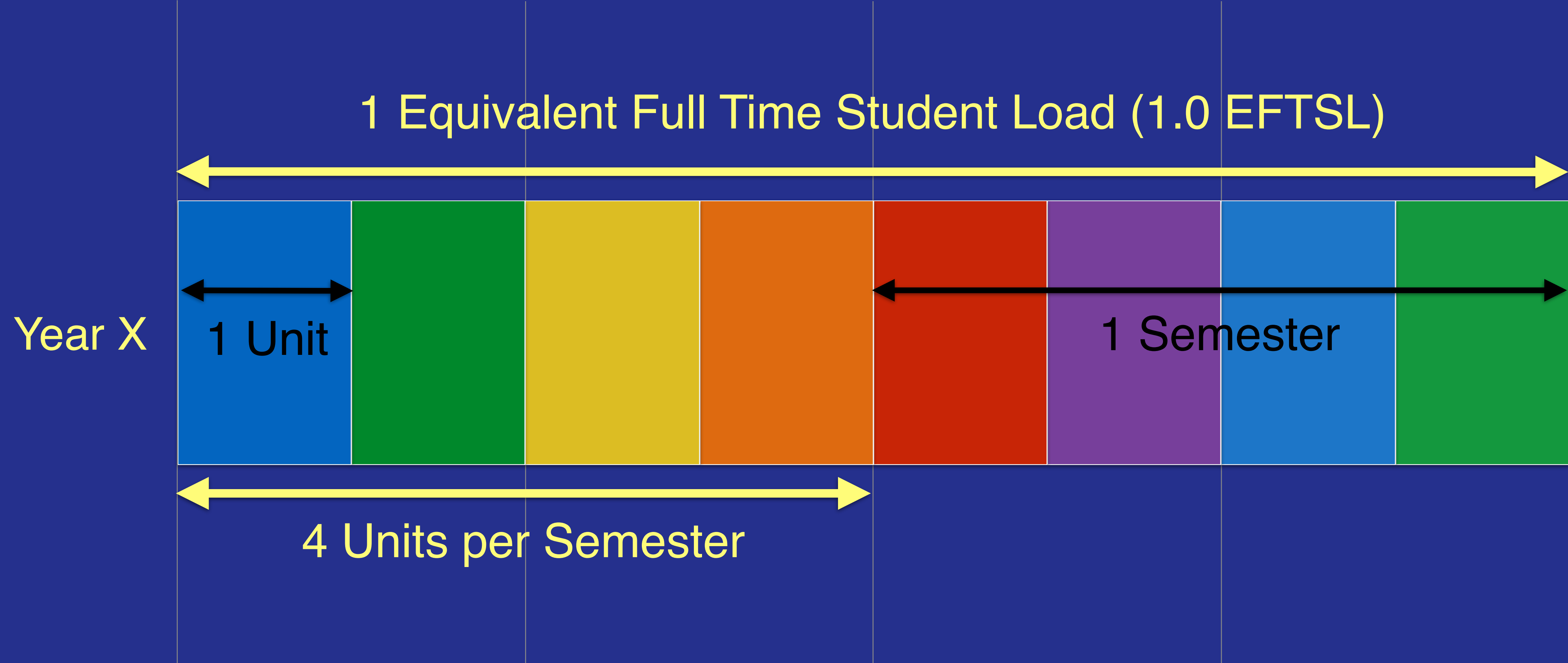
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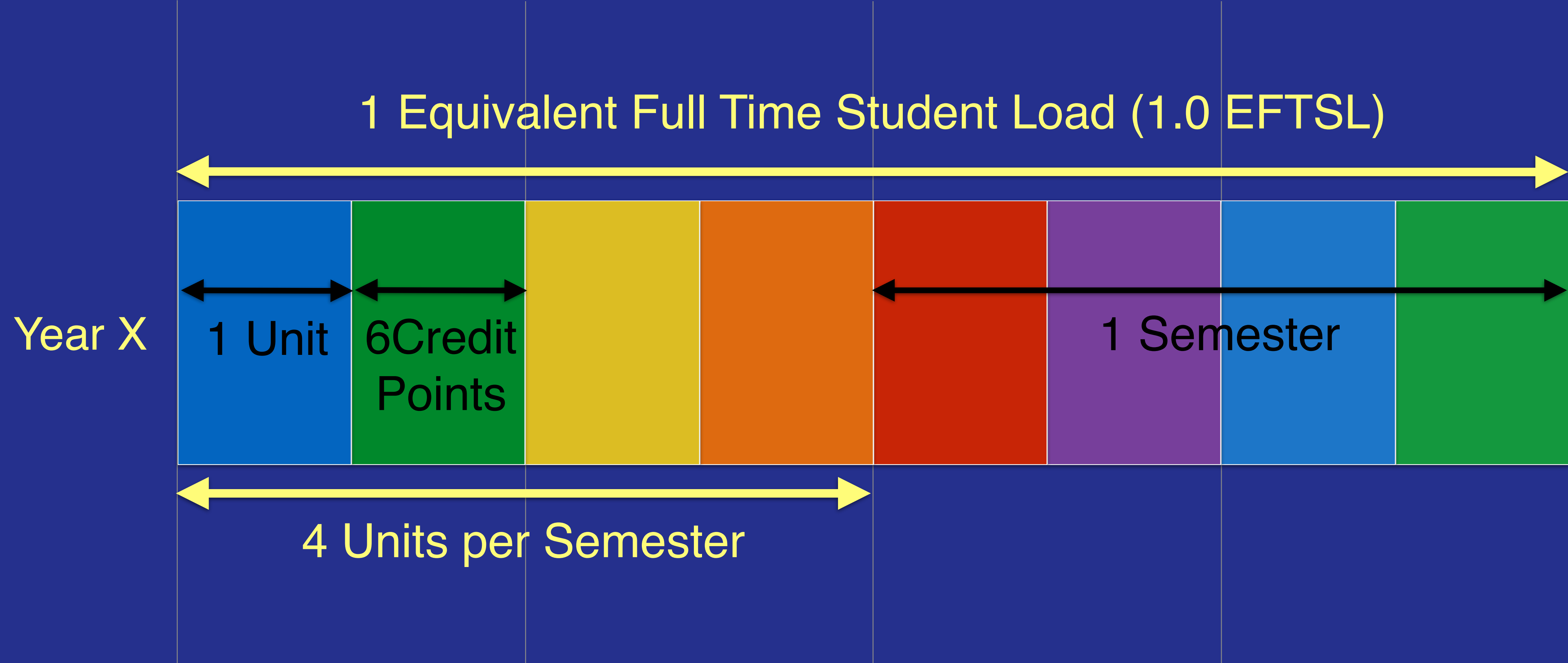
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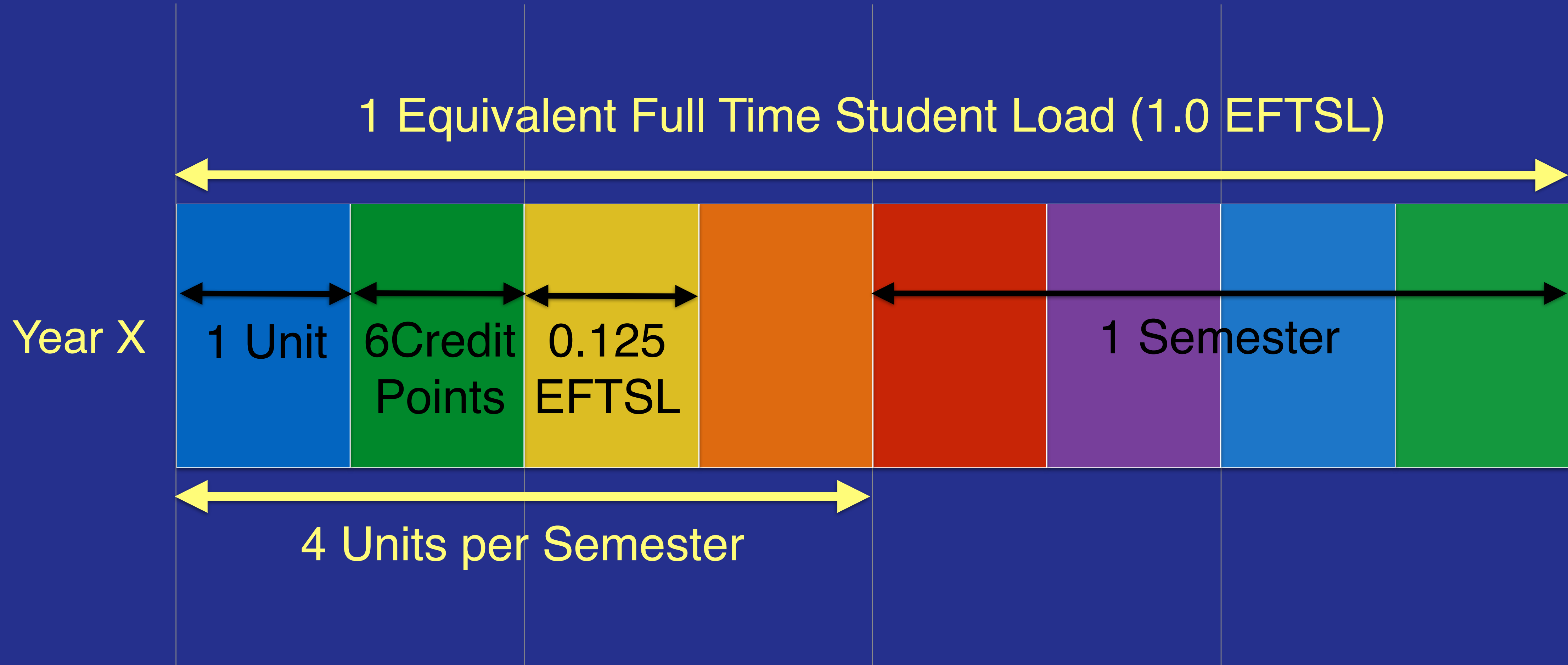
Structure



Structure



Structure



Structure

Year 1

Semester 1

Semester 2

Year 2

Semester 3

Semester 4

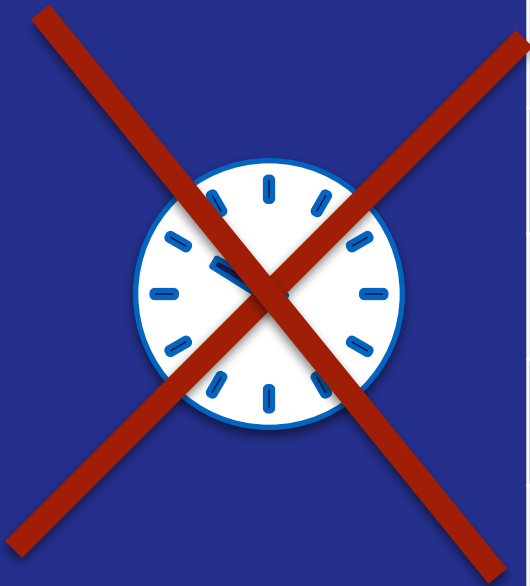
Structure



	Unit
Semester 1	
Semester 2	
Semester 3	
Semester 4	

Structure

	Unit
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	



Structure

	Unit
1	
2	
3	
4	
5	10 Coursework Units
6	
7	
8	
9	
10	
11	
12	
13	6 Research Units
14	
15	
16	

Structure

	Unit
1	
2	
3	6 Coursework Units (Non-Core)
4	
5	
6	
7	
8	4 Coursework Units (Core)
9	
10	
11	
12	
13	6 Research Units (Core)
14	
15	
16	

Structure

	Unit
1	
2	
3	6 Coursework Units (Non-Core)
4	
5	
6	
7	Radio Astronomy & the Interstellar Medium
8	Galaxies & Galactic Dynamics
9	Cosmological Physics
10	Computational Statistics for Physics
11	
12	
13	6 Research Units (Core)
14	
15	
16	

Structure

	Unit
1	
2	
3	6 Coursework Units (Non-Core)
4	
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7	Radio Astronomy & the Interstellar Medium
8	Galaxies & Galactic Dynamics
9	Cosmological Physics
10	Computational Statistics for Physics
11	Research Proposal in Astronomy & Astrophysics
12	Physics Research Project Part 1
13	Physics Research Project Part 2
14	Physics Research Project Part 3
15	Physics Research Project Part 4
16	Dissertation in Astronomy & Astrophysics

Structure

	Unit	
1	Required Conversion Units	OR Coursework Units (Option)
2		OR
3		Advance Standing
4		
5	2 Coursework Units (Option)	
6		
7	Radio Astronomy & the Interstellar Medium	
8	Galaxies & Galactic Dynamics	
9	Cosmological Physics	
10	Computational Statistics for Physics	
11	Research Proposal in Astronomy & Astrophysics	
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Structure

	Up to 4 Required Conversion Units
CITS1401	Computational Thinking with Python
MATH2501	Advanced Mathematical Methods
PHYS2001	Quantum Physics & Electromagnetism
PHYS2002	Many-Particle Systems
PHYS2003	Physics for Electrical Engineers
PHYS3001	Quantum Mechanics & Atomic Physics
PHYS3002	Electrodynamics & Relativity
PHYS3003	Astrophysics & Space Science
PHYS3005	Quantum Computation
PHYS3011	Mathematical Physics
PHYS3012	Topics in Contemporary Physics (Astro Stream)
PHYS3101	Quantum Field Theory & Quantum Technology

Structure

	Unit	
1	Required Conversion Units	OR Coursework Units (Option)
2		OR
3		Advance Standing
4		
5	2 Coursework Units (Option)	
6		
7	Radio Astronomy & the Interstellar Medium	
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Structure

Available	Take 2 – 6 Option Units
Sem 2	Gravitational-Wave and High-Energy Astronomy
Sem 1	Frontiers in Experimental Physics
Sem 1	Computational Methods for Physics
Sem 1	Quantum Information & Computing
Sem 2	Differential Geometry & General Relativity
Sem 1	Advanced Mathematical Physics & Relativistic Electrodynamics
Sem 1	Symmetry Principles in Physics
Sem 2	Advanced Statistical & Condensed Matter Physics
Sem 2	Quantum Measurement & Technology
Sem 2	Quantum Field Theory
Sem 1,2	Physics Reading Unit

Example Study Plans

Example Study Plans

- 🔄 *Kim has completed an undergraduate degree at UWA*
- 🔄 *Sam is a domestic student who has completed an undergraduate degree in Physics, and requires some conversion units prior to commencing research..*
- 🔄 *Avery is a domestic student who has completed an undergraduate degree in Physics, and requires some conversion units for coursework, but is otherwise ready to commence some research.*
- 🔄 *Ash is an international student commencing in Semester 2, and requires some conversion units*
- 🔄 *Jo is an international student commencing in Semester 2, with a strong background in physics and astrophysics*
- 🔄 *Jay is a domestic student who completed an undergraduate degree in Physics two years ago, with a strong focus on quantum mechanics*
- 🔄 *Cam is a domestic student who completed an undergraduate degree in Physics four years ago*
- 🔄 *Jackie has completed an undergraduate degree at UWA, and does not want to take optional units*

Example Study Plans: “Kim”

Example Study Plans: “Kim”

- BSc Physics + Mathematics & Statistics = UWA Physics
- Statistics
- Basic programming in R
- Offered 24 points of advance standing (4 units), but decides to take 4 additional option units instead to make the most of the MPhys
- Completing the degree over four semesters
- Keen to start research early in the course

Example Study Plans: “Kim”

	Unit	Type
Semester 1	Radio Astronomy & the Interstellar Medium	
	Galaxies & Galactic Dynamics	
	Frontiers in Experimental Physics (Astro Stream)	Option
	Research Proposal in Astronomy & Astrophysics	
Semester 2	Cosmological Physics	
	Computational Statistics for Physics	
	Gravitational-Wave and High-Energy Astrophysics	Option
	Physics Research Project Part 1	
Semester 3	Physics Research Project Part 2	
	Physics Research Project Part 3	
	Computational Methods for Physics	Option
	Advanced Mathematical Physics & Relativistic Electrodynamics	Option
	Physics Research Project Part 4	
Semester 4	Dissertation in Astronomy & Astrophysics	
	Differential Geometry & General Relativity	Option
	Frontiers in Quantum Computation	Option

Example Study Plans: “Sam”

- BSc Physics < UWA Physics
- No astronomy or astrophysics units
- No programming experience
- Takes 4 Conversion Units
- Delays commencing Research Units until completed more coursework
- Completing the degree over four semesters

Example Study Plans: “Sam”

	Unit	Type
Semester 1	Computational Thinking with Python	Conv
	Astrophysics & Space Science	Conv
	Radio Astronomy & the Interstellar Medium	
	Galaxies & Galactic Dynamics	
Semester 2	Electrodynamics & Relativity	Conv
	Frontiers in Modern Physics (Astro Stream)	Conv
	Cosmological Physics	
	Computational Statistics for Physics	
Semester 3	Research Proposal in Astronomy & Astrophysics	
	Physics Research Project Part 1	
	Physics Research Project Part 2	
	Frontiers in Experimental Physics (Astro Stream)	Option
Semester 4	Physics Research Project Part 3	
	Physics Research Project Part 4	
	Dissertation in Astronomy & Astrophysics	
	Gravitational-Wave & High-Energy Astrophysics	Option

Example Study Plans: “Avery”

- BSc Physics < UWA Physics
- No astronomy or astrophysics units
- No programming Experience
- Takes 4 Conversion Units
- Doing an experimental project & is ready to commence research
- Completing the degree over four semesters

Example Study Plans: “Avery”

	Unit	Type
Semester 1	Computational Thinking with Python	Conv
	Astrophysics & Space Science	Conv
	Radio Astronomy & the Interstellar Medium	
	Research Proposal in Astronomy & Astrophysics	
Semester 2	Electrodynamics & Relativity	Conv
	Frontiers in Modern Physics (Astro Stream)	Conv
	Computational Statistics for Physics	
	Physics Research Project Part 1	
Semester 3	Galaxies & Galactic Dynamics	
	Frontiers in Experimental Physics	Option
	Physics Research Project Part 2	
	Physics Research Project Part 3	
Semester 4	Cosmological Physics	
	Gravitational-Wave & High-Energy Astrophysics	Option
	Physics Research Project Part 4	
	Dissertation in Astronomy & Astrophysics	

Example Study Plans: “Jackie”

- BSc (Physics & Computer Science) = UWA Physics + Comp Sci
- Although a domestic student offered a Commonwealth Supported Place, Jackie is keen to get into workforce as soon as possible.
- Therefore takes 4 units of advance standing on offer
- Completing the degree over three semesters

Example Study Plans: “Jackie”

	Unit	Type
Semester 1	Radio Astronomy & the Interstellar Medium	
	Galaxies & Galactic Dynamics	
	Frontiers in Experimental Physics (Astro Stream)	Option
	Research Proposal in Astronomy & Astrophysics	
Semester 2	Cosmological Physics	
	Computational Statistics for Physics	
	Gravitational-Wave and High-Energy Astrophysics	Option
	Physics Research Project Part 1	
Semester 3	Physics Research Project Part 2	
	Physics Research Project Part 3	
	Physics Research Project Part 4	
	Dissertation in Astronomy & Astrophysics	

Questions?



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