

Teaching program

PEIP

Academic year 2019-2020

Ecole polytechnique de l'université de Nantes

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Part I

Tables of teaching units

Semester 1 - unit *PEIP A*

Knowledge of the Engineering Profession

Manager : *GUEDON Jean-Pierre*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• The Engineering Profession: A Survey	1.5			12			1
TOTAL	1.5	0	0	12	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	1.5	0	0	12	0	0	0
Face-to-face sum	13.5						

Semester 1 - unit *PEIP D – GEII*

Design and Manufacturing

Manager : *DIOURIS Jean-François*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Design and Manufacturing				36			1
TOTAL	0	0	0	36	0	0	

Tutorat GEII S1

Manager : *DIOURIS Jean-François*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Tutoring GEII S1		3					1
TOTAL	0	3	0	0	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	3	0	36	0	0	0
Face-to-face sum	39						

Semester 1 - unit *PEIP D – INFO*

Tutorat INFO S1

Manager : *RICORDEL Vincent*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Tutoring INFO S1		8					1
TOTAL	0	8	0	0	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	8	0	0	0	0	0
Face-to-face sum	8						

Semester 1 - unit *PEIP D – MP*

MP Training Support S1

Manager : AIT-AHMED Mourad

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Training Support MP S1		25					1
TOTAL	0	25	0	0	0	0	

Tutoring MP S1

Manager : AIT-AHMED Nadia

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Tutoring MP S1		4					1
TOTAL	0	4	0	0	0	0	

Project MP S1

Manager : AIT-AHMED Nadia

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Project MP S1				13			1
TOTAL	0	0	0	13	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	29	0	13	0	0	0
Face-to-face sum	42						

Semester 1 - unit *PEIP D – RT*

Design and Manufacturing

Manager : *DIOURIS Jean-François*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Design and Manufacturing				36			1
TOTAL	0	0	0	36	0	0	

Tutoring RT S1

Manager : *MOTTA CRUZ Eduardo*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Tutoring RT S1		3					1
TOTAL	0	3	0	0	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	3	0	36	0	0	0
Face-to-face sum	39						

Semester 2 - unit *PEIP A*

Repeated-measures Experiments

Manager : *CROSNIER Olivier*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Repeated-measures Experiments	1.5	8	3	4		4	1
TOTAL	1.5	8	3	4	0	4	

Redox Thermochemistry

Manager : *PAYEN Christophe*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Redox Thermochemistry	5	10.5	7			4	1
TOTAL	5	10.5	7	0	0	4	

Numerical Methods for Physics

Manager : *LEPETIT Thomas*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Numerical Methods for Physics	5	10.5	7.5			3	1
TOTAL	5	10.5	7.5	0	0	3	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	11.5	29	17.5	4	0	11	0
Face-to-face sum	62						

Semester 2 - unit *PEIP D – GEII*

Physics and Technology

Manager : *GOULLET Antoine*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Physics and Technology				32			1
TOTAL	0	0	0	32	0	0	

Tutoring GEII S2

Manager : *DIOURIS Jean-François*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Tutoring GEII S2		4					1
TOTAL	0	4	0	0	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	4	0	32	0	0	0
Face-to-face sum	36						

Semester 2 - unit *PEIP D – INFO*

Tutoring INFO S2

Manager : *RICORDEL Vincent*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Tutoring INFO S2		8					1
TOTAL	0	8	0	0	0	0	

Project INFO S2

Manager : *RICORDEL Vincent*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Project INFO S2				45			1
TOTAL	0	0	0	45	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	8	0	45	0	0	0
Face-to-face sum	53						

Semester 2 - unit *PEIP D – MP*

Training Support MP S2

Manager : AIT-AHMED Nadia

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Training Support MP S2		8					1
TOTAL	0	8	0	0	0	0	

Project MP S2

Manager : AIT-AHMED Nadia

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Project MP S2				21			1
TOTAL	0	0	0	21	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	8	0	21	0	0	0
Face-to-face sum	29						

Semester 2 - unit *PEIP D – RT*

Mathematics or Computer Science RT S2

Manager : *MOTTA CRUZ Eduardo*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Mathematics or Computer Science RT S2		30					1
TOTAL	0	30	0	0	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	30	0	0	0	0	0
Face-to-face sum	30						

Semester 3 - unit *PEIP A*

Physics S3

ECTS : 9

Manager : *LEPETIT Thomas*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Peip 2 Updating in Physics	3.75	9		6		8	0
• Mechanics of Rigid Bodies	11.25	15		6		12	3
• Optics	12.5	16.5	3	6		12	3
• Electromagnetism 1	12.5	15		9		12	3
▷ Peip 2 Coaching in Physics S3		24					0
TOTAL	min	40	55.5	3	27	0	44
	max	40	79.5	3	27	0	44

Mathematics S3

ECTS : 9

Manager : *SOURISSE Arnaud*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Peip 2 Updating in Computer Science	3.75	4.5		10.5		8	0
• Peip 2 Updating in Mathematics	3.75	9		6		8	0
• Algebra	5	19.5		12		12	5
• Functions of Several Variables, Geometry	12.5	16.5		9		12	4
▷ Peip 2 Coaching in Mathematics S3		24					0
TOTAL	min	25	49.5	0	37.5	0	40
	max	25	73.5	0	37.5	0	40

English S3

ECTS : 2

Manager : *MORVAN Marianne*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• English S3		22				4	1
TOTAL	0	22	0	0	0	4	

Project TU S3

ECTS : 7

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Project TIPE S3	1.25			20		40	1
• Peip Tutored Project	1.25	3.5		40		8	5
• Peip Intership	0.75		0.33			10	2
TOTAL	3.25	3.5	0.33	60	0	58	

Elective Course TU

ECTS : 3

Course		Lect	Tut	PW	Proj	WP	Asst	Coef
1 opt	▷ Algorithms and Data Structures	12	10		25		10	1
	▷ Thermal and Energy Engineering	16	16		16		10	1
	▷ Engineering Materials	16	16		16		10	1
	▷ New Technologies of Electrical Energy	16	16		16		10	1
	▷ Digital Electronics	16	16		16		10	1
TOTAL	min	12	10	0	16	0	10	
	max	16	16	0	25	0	10	

PEIP Post-PACES

Manager : GUEDON Jean-Pierre

Course		Lect	Tut	PW	Proj	WP	Asst	Coef
0 à 4	▷ Post-PACES Coaching in Mathematics S3		25					0
	▷ Post-PACES Coaching in Physics S3		25					0
	▷ Peip 2 Summer Training in Mathematics	6.25	22.5					0
	▷ Peip 2 Summer Training in Physics	6.25	22.5					0
TOTAL	min	0	0	0	0	0	0	
	max	12.5	95	0	0	0	0	

Sum of semester

		Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	min	80.25	140.5	3.33	140.5	0	156	30
	max	96.75	289.5	3.33	149.5	0	156	
Face-to-face sum		373.58 à 530.08						

Semester 3 - unit *PEIP D – GEII*

Object-oriented Programming in Java

Manager : RAMSTEIN Gérard

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Object-oriented Programming in Java	12.5			17.5			0
TOTAL	12.5	0	0	17.5	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	12.5	0	0	17.5	0	0	0
Face-to-face sum	30						

Semester 3 - unit *PEIP D – INFO*

Mathematical Modelling INFO S3

Manager : *RICORDEL Vincent*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Mathematical Modelling INFO S3		34					1
TOTAL	0	34	0	0	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	34	0	0	0	0	0
Face-to-face sum	34						

Semester 3 - unit *PEIP D – MP*

Project MP S3

Manager : *MOREAU Luc*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Project MP S3				16			1
TOTAL	0	0	0	16	0	0	

Tutoring MP S3

Manager : *AIT-AHMED Nadia*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Tutoring MP S3		4					1
TOTAL	0	4	0	0	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	4	0	16	0	0	0
Face-to-face sum	20						

Semester 4 - unit *PEIP A*

Physics S4

ECTS : 10

Manager : CHAUVET Olivier

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Mechanics of Deformable Bodies	12.5	15		9		12	4
• Modern Physics	20	9		6		12	4
• Electromagnetism 2	12.5	15	3			12	4
▷ Peip Coaching in Physics S4		24					0
TOTAL	min	45	39	3	15	0	36
	max	45	63	3	15	0	36

Mathematics S4

ECTS : 10

Manager : SOURISSE Arnaud

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Analysis and Probability	17.5	17.25		10.5		8	4
• Introduction to Numerical Analysis	11.25	8.5		10.5		12	4
• Modelling	4	13				8	3
▷ Peip Coaching in Mathematics S4		24					0
TOTAL	min	32.75	38.75	0	21	0	28
	max	32.75	62.75	0	21	0	28

Economics, Management, and Social Sciences TU S4

ECTS : 3

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Communication and Enterprise	6	12				3	2
• Business and Society	7.25	7.5				3	1
TOTAL	13.25	19.5	0	0	0	6	

Project TU S4

ECTS : 5

Manager : GUEDON Jean-Pierre

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Project TIPE S4	1.5			4		60	4
TOTAL	1.5	0	0	4	0	60	

PEIP Post-PACES

Manager : LEPETIT Thomas

Course		Lect	Tut	PW	Proj	WP	Asst	Coef
0.4.2 S4	▷ Post-PACES Coaching in Mathematics		25					0
	▷ Post-PACES Coaching in Physics S4		25					0
TOTAL	min	0	0	0	0	0	0	
	max	0	50	0	0	0	0	

English S4

ECTS : 2

Manager : MORVAN Marianne

Course		Lect	Tut	PW	Proj	WP	Asst	Coef
•	English S4		22				4	1
TOTAL		0	22	0	0	0	4	

Sum of semester

		Lect	Tut	PW	Proj	WP	Asst	ECTS	
Sum	min	92.5	119.25	3	40	0	134	30	
	max	92.5	217.25	3	40	0	134		
Face-to-face sum		254.75 à 352.75							

Semester 4 - unit *PEIP D – GEII*

Project GEII S4

Manager : *DIOURIS Jean-François*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Project GEII S4				25			1
TOTAL	0	0	0	25	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	0	0	25	0	0	0
Face-to-face sum	25						

Semester 4 - unit *PEIP D – INFO*

General Mathematics Support INFO S4

Manager : *RICORDEL Vincent*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• General Mathematics Support INFO S4		26					1
TOTAL	0	26	0	0	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	26	0	0	0	0	0
Face-to-face sum	26						

Semester 4 - unit *PEIP D – MP*

Project MP S4

Manager : *MOREAU Luc*

Course	Lect	Tut	PW	Proj	WP	Asst	Coef
• Project MP S4				28			1
TOTAL	0	0	0	28	0	0	

Sum of semester

	Lect	Tut	PW	Proj	WP	Asst	ECTS
Sum	0	0	0	28	0	0	0
Face-to-face sum	28						

Part II

Sheets of courses

Algebra

Hours

Lect	Tut	PW	Proj	WP	Asst
5	19.5		12		12

Evaluation

4 evaluations :

- *CC1*
- *CC2*
- *CC3*
- *Mini Projet*

Manager : Arnaud SOURISSE

Algorithms and Data Structures

Hours

Lect	Tut	PW	Proj	WP	Asst
12	10		25		10

Evaluation

2 evaluations :

- *Théorie*
- *Pratique*

Manager : Nicolas NORMAND

Analysis and Probability

Hours

Lect	Tut	PW	Proj	WP	Asst
17.5	17.25		10.5		8

Evaluation

3 evaluations :

- *CC1*
- *CC2*
- *CC3*

Manager : Arnaud SOURISSE

Business and Society

Hours

Lect	Tut	PW	Proj	WP	Asst
7.25	7.5				3

Evaluation

One evaluation : *Exposé*

Manager : Chrystèle GONCALVES

Communication and Enterprise

Hours

Lect	Tut	PW	Proj	WP	Asst
6	12				3

Evaluation

2 evaluations :

- *CC*
- *Exposé*

Manager : Chrystèle GONCALVES

Digital Electronics

Hours

Lect	Tut	PW	Proj	WP	Asst
16	16		16		10

Evaluation

2 evaluations :

- *Théorie*
- *Pratique*

Manager : Sébastien PILLEMENT

Electromagnetism 1

Hours

Lect	Tut	PW	Proj	WP	Asst
12.5	15		9		12

Evaluation

4 evaluations :

- *CC1*
- *CC2*
- *Biblio*
- *Soutenance + Rapport*

Bibliography

- Électromagnétisme 1ère année ? J.M. Brébec ? Collection Hprépa ? Hachette Sup
- Électromagnétisme 1 - J.P. Faroux ? Collection J?intègre - Dunod
- Physique ? C. More ? Collection Tec&Doc - Lavoisier
- Le cours de Physique de Feynman - Électromagnétisme 1 ; R.Feynman, R. Leighton, M. Sands ; Dunod (2014)

Learning outcomes

Learning outcomes	N	A	M	E	O
• modelize a charge (or current) source distribution using a volumic, surfacic or lineic charges (or current) density	.	.	✓	.	.
• know how to switch equations from local to integral forms (using Green Ostrogradski and Stokes theorem)	.	✓	.	.	.
• Calculate directly electrostatic (or magnetostatic) fields integrating a finite density of charges (or currents)	.	✓	.	.	.
• modelize electrostatic and magnetostatic phenomena using a scalar or vector field	.	.	✓	.	.
• Manipulate basic vector operators (gradient, divergence, curl and laplacian)	.	✓	.	.	.
• Adapt the description scale (micro, meso or macroscopic) to the problem	.	.	✓	.	.
• Use the superposition principle to solve complex problems	.	.	✓	.	.
• Propose analogies between gravitationnal et electrostatic force (order of magnitude, Gauss theorem)	.	.	✓	.	.
• Use COMSOL multiphysics simulation software	.	✓	.	.	.
• Use a programmation software to produce a representation of a physic situation	.	✓	.	.	.
• Work as a team or in autonomy inside a project	.	.	✓	.	.

Manager : Thomas LEPETIT

Electromagnetism 2

Hours

Lect	Tut	PW	Proj	WP	Asst
12.5	15	3			12

Evaluation

3 evaluations :

- *CC1*
- *CC2*
- *Pratique*

Manager : Thomas LEPETIT

Engineering Materials

Hours

Lect	Tut	PW	Proj	WP	Asst
16	16		16		10

Evaluation

3 evaluations :

- *Théorie*
- *Soutenance*
- *Rapport*

Manager : Emmanuel BERTRAND

English S3

Hours

Lect	Tut	PW	Proj	WP	Asst
	22				4

Evaluation

3 evaluations :

- *Participation*
- *Radio Ad*
- *Song presentation*

Manager : Marianne MORVAN

English S4

Hours

Lect	Tut	PW	Proj	WP	Asst
	22				4

Evaluation

4 evaluations :

- *Re-enacting a scene*
- *Scriptwriting*
- *Sequence analysis*
- *Participation*

Manager : Marianne MORVAN

Functions of Several Variables, Geometry

Hours

Lect	Tut	PW	Proj	WP	Asst
12.5	16.5		9		12

Evaluation

3 evaluations :

- *CC1*
- *CC2*
- *CC3*

Manager : Arnaud SOURISSE

General Mathematics Support INFO S4

Hours

Lect	Tut	PW	Proj	WP	Asst
	26				

Evaluation

One evaluation : *Restitution*

Presentation

Additional general mathematics.

Work conducted in groups with varying sizes.

Outline

Group work on different topics, leading to:

- study complements in analysis, general and linear algebra, geometry, probabilities, and the links between these different areas of mathematics.
- see the links with computer sciences, with the solving of problems and the analysis of situations involving different mathematical domains
- study applications (e.g. cryptography, signal compression, image processing, formal calculation)

Goals

Give to the students the additional mathematics that are necessary for their future studies, both in terms of knowledge and complex reasoning skills.

Learning outcomes

Learning outcomes	N	A	M	E	O
• To know general mathematics and their links with computer sciences	.	✓	.	.	.

Manager : Vincent RICORDEL

Introduction to Numerical Analysis

Hours

Lect	Tut	PW	Proj	WP	Asst
11.25	8.5		10.5		12

Evaluation

3 evaluations :

- *CC1*
- *CC2*
- *Pratique*

Manager : Jean-Pierre GUEDON

Mathematical Modelling INFO S3

Hours

Lect	Tut	PW	Proj	WP	Asst
	34				

Evaluation

One evaluation : *Restitution*

Presentation

From a group work on deliberately imprecise statements, an algorithmic formulation is deduced from the uses of mathematical objects (matrices, graphs, trees) in order to solve the problem by computer way.

Some examples of problems:

- the cutting of the carpenter for a set of kitchens furnitures in a building
- the "Tour de France" of 14 Polytech's schools
- the Mojette game
- the matching between videos and testers
- the non-regular tessellation of a dining room
- the signatures games

Outline

The work is conducted in groups on different subjects, and it leads to:

- formulate a problem, and to model it
- search the necessary mathematical tools, possibly situate them in a historical perspective
- formulate a complete or partial solution, and implement it
- use adapted softwares

Goals

Implementing knowledge in mathematics by working in groups around a given problem

Bibliography

How to solve a problem, George Polya

Concrete mathematics, Ronald. L. Graham, Donald E. Knuth, Oren Patashnik

Learning outcomes

Learning outcomes	N	A	M	E	O
• To know how to formulate a problem mathematically	·	✓	·	·	·
• To know how to solve a problem by computer sciences	·	✓	·	·	·

Manager : Vincent RICORDEL

Mechanics of Deformable Bodies

Hours

Lect	Tut	PW	Proj	WP	Asst
12.5	15		9		12

Evaluation

3 evaluations :

- *CC1*
- *CC2*
- *Rapport*

Manager : Steven LE CORRE

Mechanics of Rigid Bodies

Hours

Lect	Tut	PW	Proj	WP	Asst
11.25	15		6		12

Evaluation

3 evaluations :

- *CC1*
- *CC2*
- *Pratique*

Manager : Steven LE CORRE

Modelling

Hours

Lect	Tut	PW	Proj	WP	Asst
4	13				8

Evaluation

2 evaluations :

- *CC*
- *Exposé*

Manager : Jean-Pierre GUEDON

Modern Physics

Hours

Lect	Tut	PW	Proj	WP	Asst
20	9		6		12

Evaluation

2 evaluations :

- *CC*
- *Soutenance*

Manager : Olivier CHAUVET

New Technologies of Electrical Energy

Hours

Lect	Tut	PW	Proj	WP	Asst
16	16		16		10

Evaluation

3 evaluations :

- *Th 1*
- *Th 2*
- *Pratique*

Manager : Luc MOREAU

Numerical Methods for Physics

Hours

Lect	Tut	PW	Proj	WP	Asst
5	10.5	7.5			3

Evaluation

2 evaluations :

- *CC Pratique*
- *CC Oral*

Manager : Jean-Pierre GUEDON

Optics

Hours

Lect	Tut	PW	Proj	WP	Asst
12.5	16.5	3	6		12

Evaluation

3 evaluations :

- *CC1*
- *CC2*
- *Pratique*

Manager : Thomas LEPETIT

Peip Intership

Hours

Lect	Tut	PW	Proj	WP	Asst
0.75		0.33			10

Evaluation

One evaluation : *Rapport*

Manager : Chrystèle GONCALVES

Peip Tutored Project

Hours

Lect	Tut	PW	Proj	WP	Asst
1.25	3.5		40		8

Evaluation

One evaluation : *Projet*

Manager : Fabien PICAROUGNE

Project INFO S2

Hours

Lect	Tut	PW	Proj	WP	Asst
			45		

Evaluation

One evaluation : *Pratique*

Presentation

Description and planning of short projects in computer sciences.
The work is conducted in groups of varying size.

Outline

A set of activities and tasks, related to the conduct of a short project in computer sciences, is conducted with for instance:

- Writing a specification
- Constitution of a team
- Distribution, planning and execution of tasks
- Time and delay management
- Documentation, report and oral presentation

Goals

Implementation of project management methods in computer sciences.

Learning outcomes

Learning outcomes	N	A	M	E	O
• To know how to manage a short project in computer sciences	.	✓	.	.	.

Manager : Vincent RICORDEL

Project TIPE S3

Hours

Lect	Tut	PW	Proj	WP	Asst
1.25			20		40

Evaluation

One evaluation : *Fiche TIPE*

Manager : Jean-Pierre GUEDON

Project TIPE S4

Hours

Lect	Tut	PW	Proj	WP	Asst
1.5			4		60

Evaluation

One evaluation : *Projet*

Manager : Jean-Pierre GUEDON

Redox Thermochemistry

Hours

Lect	Tut	PW	Proj	WP	Asst
5	10.5	7			4

Evaluation

2 evaluations :

- *CC Ecrit*
- *CC Pratique*

Manager : Christophe PAYEN

Repeated-measures Experiments

Hours

Lect	Tut	PW	Proj	WP	Asst
1.5	8	3	4		4

Evaluation

One evaluation : *Note*

Manager : Olivier CROSNIER

The Engineering Profession: A Survey

Hours

Lect	Tut	PW	Proj	WP	Asst
1.5			12		

Evaluation

One evaluation : *Note*

Manager : Jean-Pierre GUEDON

Thermal and Energy Engineering

Hours

Lect	Tut	PW	Proj	WP	Asst
16	16		16		10

Evaluation

2 evaluations :

- *Examen TE*
- *Examen GPB*