



**Annex 1**

**Table 1 – Structure of the double diploma**

	<b>Sapienza Università di Roma, Laurea Magistrale in Ingegneria Gestionale. Students must elect to take the <i>Gestione dei Sistemi Produttivi e Logistici (GSPL) curriculum</i></b>	<b>CENTRALESUPELEC Engineering curriculum Dominante Grands Systemes en Interaction (GSI). Mention Supply Chain and Operations Management <sup>§§§</sup></b>	<b>ECTS</b>
<b>1<sup>st</sup> year</b>	Courses taken at Sapienza transferrable to CentraleSupelec	Courses transferred from Sapienza *	60
<b>2<sup>nd</sup> year</b>	Transferred courses (+ Internship) from CentraleSupelec (S7 – S8 – S9 – S10) **	Courses transferred from Sapienza (+ Thesis)	60
<b>Total ECTS</b>			<b>120</b>

\* Students from CentraleSupélec would join Sapienza after their second year of Engineering Cycle. They will attend courses at Sapienza - LM first year and second year - for an amount of 120 ECTS overall, or less if some courses already taken at CentraleSupélec are recognized.

\*\* Sapienza students would join CentraleSupélec after their first year of LM programme. They will attend the 2<sup>nd</sup> and the 3<sup>rd</sup> year at CentraleSupélec (i.e. S7, S8, S9 and S10) including the project and stage. Students are expected to write a report on their stage experience (minimum 70 pages).

§§§ If a student from Sapienza is not admitted to the curriculum Mention Supply Chain and Operations Management, due to his/her notes at the end of 2<sup>nd</sup> year at CentraleSupélec, he/she will be enrolled in the Mention Design and System Sciences Curriculum.

**First year**

**Courses attended by Sapienza and by CentraleSupélec students at Sapienza**

<b>Course Title</b>		<b>Location</b>
<b>GSPL 1</b> Economia dei Sistemi Industriali	12	Sapienza
<b>GSPL 2</b> Gestione degli Impianti Industriali	9	
<b>GSPL 4</b> Modellistica e Identificazione	9	
<b>GSPL 5</b> Programmazione Intera e Ottimizzazione Combinatoria	12	
<b>GSPL 6</b> Sistemi di Servizio e Simulazione	6	

<b>GSPL 11</b> Sistemi Informativi Aziendali	6	
<b>GSPL 12 A scelta</b> Choose one from those included in GSPL 7, GSPL 8, GSPL 9, GSPL 10, GSPL 11	6	

## Second year

### Courses attended by Sapienza students at CentraleSupélec and by CentraleSupélec students at Sapienza

<p><b>Choose:</b> <b>SD9</b> (Ingenierie des systemes complexes, commande des systemes complexes, Introduction au management des operations et a la supply chain, aide a la decision, modelisation technico-economique) 8 CFU <b>or SG 10</b> (Introduction Supply chain &amp; Operations, Strategie et finance, Demand &amp; supply planning, Prevision de la demande, Management de Production) 8 CFU</p>	<b>GSPL 3</b> Gestione dei Progetti (9)
<p>Automatic control (2.5) + One course (5) from ST5 among: Ecological district, a complex system Multi-energy systems Industrial complex and critical systems (or equivalent courses in ST5)</p>	<b>GO-GSPL-EGT-MDIG</b> Choose one (6) from: Programmazione e Controllo della Produzione Tecnologie di Additive Manufacturing
<p>Optimization (2.5) + Choose two from: Marketing Strategy and organization (2.5) Economics of growth and innovation (2.5) Big data management (2.5) Machine learning (2.5) Corporate Finance and Law (2.5) + Choose one from: Stochastic Finance and Risk Modelling (7) Optimization of Network Infrastructure for Smart Cities (7) Circular Economy and Industrial Systems (7) Optimization of Passenger Transport Systems (7) Additive Manufacturing Design (7) + Choose two from: Renewable Energies (2.5) Artificial Intelligence (2.5) Scientific Calculation (2.5) Mobility Issues (2.5) Advanced Statistics (2.5) Economics of the Environment, energy and sustainable development (2.5) Maintenance and Industry 4.0 (2.5) Innovation Management and Business Creation (2.5) Supply Chain Operations Management (2.5)</p>	<b>GSPL 8, 9, 10</b> Choose three (18) from: Gestione della Qualità Programmazione e Controllo della Produzione (if not chosen at GSPL 7) Safety and Maintenance for Industrial Systems Smart Factory Tecnologie di Additive Manufacturing (if not chosen at GSPL 7) Tecnologie Speciali
<p><b>Choose:</b> <b>SG 11</b> (Hackathon Lean Six Sigma &amp; Supply Chain, Data Science for Supply Chain &amp; Operations, Industrie 4.0 &amp; Supply Chain Digital, Data Analytics &amp; ML) 8 CFU <b>or SG10</b> (Introduction Supply chain &amp; Operations, Strategie et finance, Demand &amp; supply planning, Prevision de la demande, Management de Production) <b>(if not chosen to replace SD9)</b></p>	<b>GSPL 11</b> Choose one (6) from: Analisi Finanziaria dell'Impresa Gestione degli Acquisti Marketing and Innovation Management Sistemi di Controllo di Gestione Sistemi Informativi Aziendali
S7 Project	Laboratorio 3

**Information about courses at Sapienza are available at:**

<http://www.ingegneriagestionale.uniroma1.it/laureamagistrale/insegnamenti>

[https://corsidilaurea.uniroma1.it/it/corso/2021/29936/programmazione?current\\_erogata=68e9e293-8d90-4032-ba0f-778c10758071&guid\\_cv=9c7ac1ec-aea5-4ae8-820b-20851f65cde1](https://corsidilaurea.uniroma1.it/it/corso/2021/29936/programmazione?current_erogata=68e9e293-8d90-4032-ba0f-778c10758071&guid_cv=9c7ac1ec-aea5-4ae8-820b-20851f65cde1)

**Information about courses at CentraleSupelec are available at:**

<https://www.centralesupelec.fr/fr/mobilite-entrante-0?tab=double-diplome>

## **Tabelle di equiparazione Centrale Supelec**

### **Equivalence between the Italian and the French grading systems**

<b>Sapienza, Italy</b>	<b>CentraleSupélec, France</b>
≤17	F
18	D
19/21	C-
21/22	C
23/24	C+
25	B-
26	B
27	B+
28 / 29	A-
30	A
30 cum laude	A+

### **Equivalence between the Italian and the French grading systems for final grade**

<b>Sapienza, Italy</b>	<b>CentraleSupélec, France</b>
<i>Fail</i>	<i>GPA 0 / ECTS F</i>
<i>Less than 90 and 90</i>	<i>GPA 1 / ECTS E</i>
<i>between 91 and 100:</i>	
91-94	<i>GPA 2 / ECTS D</i>
95-98	<i>GPA 2.25 / ECTS D</i>
99-100	<i>GPA 2.5 / ECTS C</i>
<i>between 101 and 109:</i>	
101-103	<i>GPA 2.75 / ECTS C</i>
104-106	<i>GPA 3 / ECTS B</i>
107-109	<i>GPA 3.25 / ECTS B</i>
<i>110 and 110 cum laude</i>	<i>GPA 3.5 – 4 / ECTS A</i>