

# **Seminario de Recursos Humanos y Capacitación**

**Planificación de la Instrucción**



# Planificación de la Instrucción

---

- ③ Proyección de doce a sesenta meses
- ③ Programa de Instrucción – Capítulo seis del manual de planificación de los Recursos Humanos

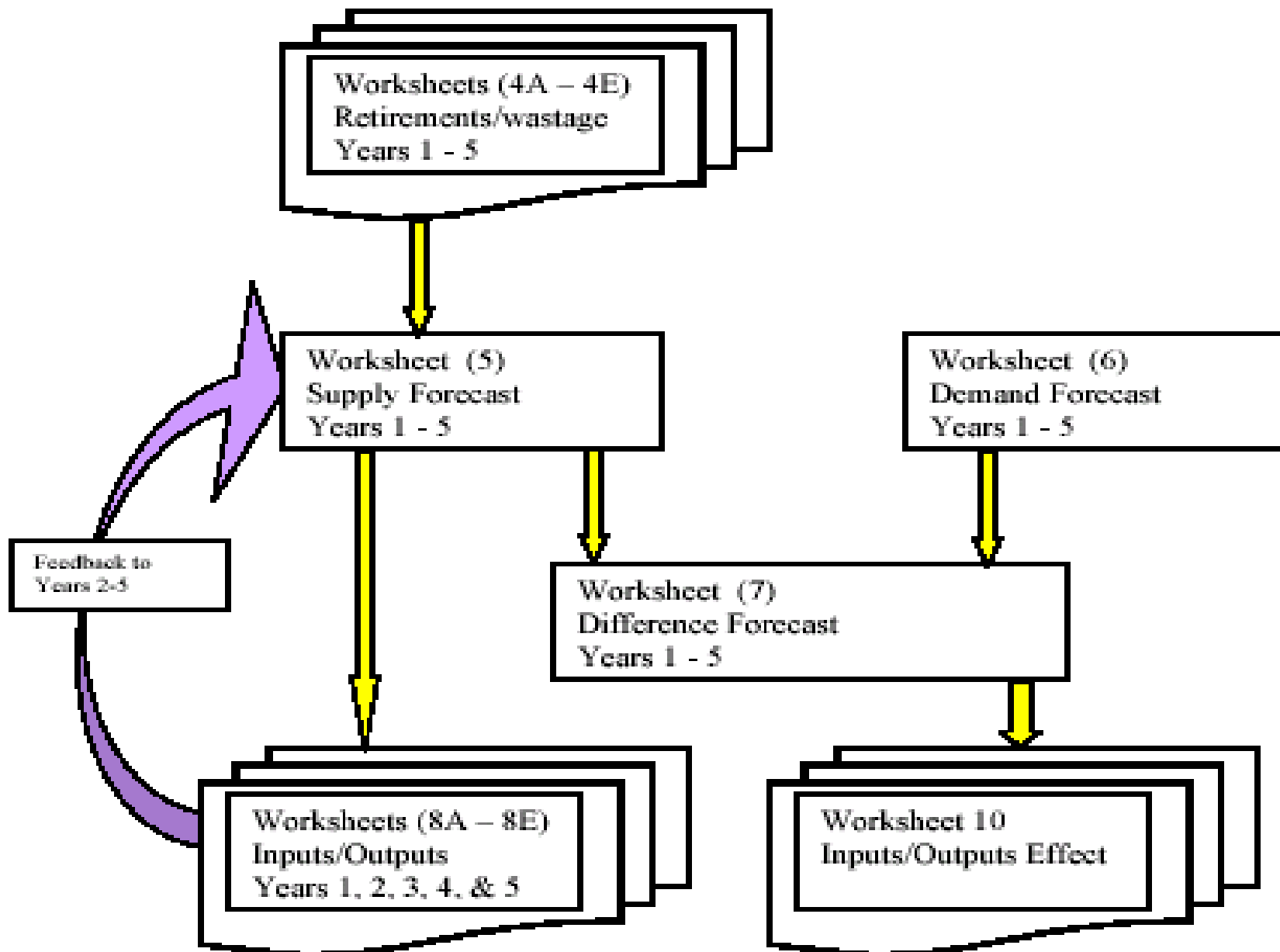


# Volumen de Instrucción

---

- ③ Diferencia entre los requerimientos de personal previstos y la cantidad prevista de personal disponible
- ③ Marco para las políticas de instrucción organizacional





Microsoft Excel - NewCNSHrpData-3b.xls

File Edit View Insert Format Tools Data Window Help Acrobat

WORKSHEET 7 - DIFFERENCE FORECAST (YEARS 1 - 5)									
	A	B	C	D	E	F	G	H	I
	Code	Job Category	Number Staff Budgeted	Staff Base Year	(+/-) Base Year 1	(+/-) Year 2	(+/-) Year 3	(+/-) Year 4	(+/-) Year 5
126									
127									
128									
129									
130	SCG-1	Supervisor Communications Grade 1	4	3	-1	-1	-1	-2	-3
131	SCG-2	Supervisor Communications Grade 2	21	15	-6	-9	-10	-12	-14
132	SMG-1	Supervisor Navigation Grade 1	6	3	-3	-4	-6	-8	-9
133	SMG-2	Supervisor Navigation Grade 2	20	7	-13	-13	-14	-15	-18
134	SSG-1	Supervisor Surveillance Grade 1	4	4	0	-2	-5	-7	-8
135	SSG-2	Supervisor Surveillance Grade 2	24	11	-14	-14	-15	-18	-20
136	CMT-S	Communications Maintenance Technician (Senior)	35	32	-3	-5	-8	-12	-15
137	CMT-J	Communications Maintenance Technician (Junior)	36	34	-2	-3	-4	-8	-13
138	CST-S	Communications Systems Technician (Senior)	15	7	-8	-8	-10	-11	-12
139	CST-J	Communications Systems Technician (Junior)	21	15	-7	-7	-8	-8	-9
140	NAMT-S	NavAids Maintenance Technician (Senior)	14	12	-2	-2	-3	-7	-11
141	NAMT-J	NavAids Maintenance Technician (Junior)	21	19	-2	-3	-3	-7	-12
142	NAST-S	NavAids Systems Technician (Senior)	6	4	-2	-3	-4	-5	-6
143	NAST-J	NavAids Systems Technician (Junior)	12	2	-10	-10	-10	-11	-12
144	RMT-S	Radar Maintenance Technician (Senior)	21	18	-3	-6	-8	-9	-15
145	RMT-J	Radar Maintenance Technician (Junior)	27	19	-8	-8	-10	-11	-16
146	RST-S	Radar Systems Technician (Senior)	15	8	-7	-7	-8	-9	-11
147	RST-J	Radar Systems Technician (Junior)	15	9	-7	-7	-8	-9	-12
148	RDT-S	Radar Data Processor Technician (Senior)	9	6	-4	-4	-4	-4	-5
149	RDT-J	Radar Data Processor Technician (Junior)	27	16	-11	-12	-14	-15	-16
150	MMT-J	Miscellaneous Maintenance Technician (Junior)	0	5	5	5	5	2	0
151	MMT-S	Miscellaneous Maintenance Technician (Senior)	6	5	-1	-2	-2	-4	-5
152	MST-S	Message Switch Technician (Senior)	18	14	-5	-5	-9	-10	-12
153	MST-J	Message Switch Technician (Junior)	16	16	0	-2	-2	-3	-6
154	MSDT-S	Message Switch Software Technician (Senior)	3	1	-2	-2	-2	-3	-3
155	MSDT-J	Message Switch Software Technician (Junior)	27	3	-24	-24	-24	-24	-24
156	EMDT-S	Electro-Mechanical Devices Technician (Senior)	6	24	18	17	14	13	13
157	EMDT-J	Electro-Mechanical Devices Technician (Junior)	43	23	-19	-20	-21	-22	-27
158	SWMT-S	Software Maintenance Technician (Senior)	6	2	-4	-4	-4	-4	-4
159	SWMT-J	Software Maintenance Technician (Junior)	18	0	-18	-18	-18	-18	-18
160		Network Technician							
161		Systems Analyst							
162		Automation Specialist							
163		Project Managemet							
164			<b>499</b>	<b>334</b>	<b>-165</b>	<b>-187</b>	<b>-218</b>	<b>-260</b>	<b>-323</b>

# Tipos de Instrucción

---

- ③ **Básica**
- ③ **Inicial**
- ③ **De transición**
- ③ **De Conversión**
- ③ **De Repaso**



	A	B	C
3	<b>WORKSHEET - 17 AIR TRAFFIC CONTROLLER TRAINING CAPACITY</b>		
4	<b>Constraints</b>	<b>Training Centre Data</b>	<b>OJT Data</b>
5	Intakes per year	3	
6	Ab initio controllers per intake	12	
7	Academy capacity per year (B5 * B6)	36	
10	Success rate in percent	72	
11	Estimate graduate per year (B7 * B10)	26	
12	Number of years for planning purpose	4	
13	Number of graduates over planning period (B11 * B12)	104	
14	Maximum number of ATC OJT's/year		50
15	Expected trainees for OJT per year (B13 / B12)		26
16	Maximum number of ATC OJT's/year, existing controllers (C14 - C15)		24

**WORKSHEET 11 - TRAINING NEEDS TO SUPPORT STAFF SHORTAGES - END YEAR 1**

From WS-1 CNS Dbase Col.B      **WS-7 Col.F**      Selected by user from Column N

**STAFFING DATA**      **TRAINING NEEDS**

Job Category	Category Code	Staff shortage	Found. Training	Initial Training	Transit. Training	Conv. Training	Refresh. Training	Superv. Training	Manag. Training
Supervisor Communications Grade 1	SCG-1	(0)							
Supervisor Communications Grade 2	SCG-2	(8)				6		6	
Supervisor Navigation Grade 1	SNG-1	(2)							2
Supervisor Navigation Grade 2	SNG-2	(13)				13		13	
Supervisor Surveillance Grade 1	SSG-1	1							
Supervisor Surveillance Grade 2	SSG-2	(13)				13		13	
Communications Maintenance Technician (Senior)	CMT-S	(3)					3		
Communications Maintenance Technician (Junior)	CMT-J	(2)	2	2					
Communications Systems Technician (Senior)	CST-S	(8)					8		
Communications Systems Technician (Junior)	CST-J	(7)	5		2				
NavAids Maintenance Technician (Senior)	NAMT-S	(2)					2		
NavAids Maintenance Technician (Junior)	NAMT-J	(2)			2				
NavAids Systems Technician (Senior)	NAST-S	(1)				1			
NavAids Systems Technician (Junior)	NAST-J	(10)	5		5				
Radar Maintenance Technician (Senior)	RMT-S	(3)					3		
Radar Maintenance Technician (Junior)	RMT-J	(8)	2		6				
Radar Systems Technician (Senior)	RST-S	(7)					7		
Radar Systems Technician (Junior)	RST-J	(7)	4		3				
Radar Data Processor Technician (Senior)	RDT-S	(4)					4		
Radar Data Processor Technician (Junior)	RDT-J	(12)		12					
Miscellaneous Maintenance Technician (Junior)	MMT-J	5							
Miscellaneous Maintenance Technician (Senior)	MMT-S	(1)					1		
Message Switch Technician (Senior)	MST-S	(5)			5		5		
Message Switch Technician (Junior)	MST-J	(0)							
Message Switch Software Technician (Senior)	MSDT-S	(2)			2		2		
Message Switch Software Technician (Junior)	MSDT-J	(24)		24					
Electro-Mechanical Devices Technician (Senior)	EMDT-S	18							

# Previsiones de Instrucción utilizadas para la Proyección

---

- ④ **Requerimientos de Instrucción del personal**
- ④ **Necesidades de Instalaciones**
- ④ **Requerimientos de Equipo de Instrucción**
- ④ **Presupuesto!**



# **Requerimientos de Instrucción del Personal**

B

C

## WORKSHEET 15A - TRAINING CENTRE STAFFING DATA

### Description of Data

### User Data Input

### PERSONNEL DATA

**Days per year:**

365

**Hours per day:**

24

**Hours per working day:**

7.5

**Work schedule, Days On:**

5

**Work schedule, Days Off:**

2

**Annual leave, Days per year:**

30

**Average sick days per year:**

6

**Statutory holidays per year:**

12

**Average training days per year:**

10

**Other (days off per year):**

5

**Breaks per working day in**

**Hours:**

1

# Hoja de Trabajo de los Factores de Personal

---

- ③ Ingresos distintos a los del usuario
- ③ Enlaces automáticos a la hoja de trabajo 15C – “Cantidad de Cursos/Instructores/Año”
- ③ La hoja de trabajo calcula los días de trabajo disponibles por año del Instructor



J K L M N O P Q R S T

**WORKSHEET 15C - Number of Course / Instructors / Year**

This worksheet is interactive. User to enter data into "white cells"

Available Instructor trainee - contact days per year (WS-3 SF CNS H61) = 198 Training days per week = 5

A	B user	C	D user	E (M7*T4)	F user	G user	H (P7*Q4)	I (O7*Q7)	J (R7/N7)	K C*E*F/H
Sample Training Courses	No. Trainees/ Course	No. of Courses	Duration of Course in Weeks	Duration of Course in days	No. Instructors/ Course	Instructor % of trainee contact	One Instructor for training /days /year	No. of training days for all Instructors	Max No. of courses/year ref. Col.C	Number of Instructors to teach "x" courses
Initial Training Intro NavAids	6	4	12	60	2.5	0.65	129	321	5.4	4.7
Initial Training Radar Systems	8	4	20	100	3	0.65	129	386	3.9	9.3
Conversion Training Intro. To CNS	12	12	3	15	2	0.80	158	316	21.1	2.3
Conversion Training Data Comm.	8	10	4	20	2	0.70	138	277	13.8	2.9
Conversion Training The ATN	8	2	8	40	2.5	0.70	138	346	8.7	2.5
Management	12	3	3	15	2	0.80	138	277	18.5	2.0

**Cantidad de alumnos/año**



**Cantidad máxima de  
alumnos por curso**

**— Cantidad de  
— cursos por  
año**

J K L M N O P Q R S T

**WORKSHEET 15C - Number of Course / Instructors / Year**

This worksheet is interactive. User to enter data into "white cells"

Available Instructor trainee - contact days per year (WS-3 SF CNS H61) = 198 Training days per week = 5

A	B user	C	D user	E (M7*T4)	F user	G user	H (P7*Q4)	I (O7*Q7)	J (R7/N7)	K C*E*F/H
Sample Training Courses	No. Trainees/ Course	No. of Courses	Duration of Course in Weeks	Duration of Course in days	No. Instructors/ Course	Instructor % of trainee contact	One Instructor for training /days /year	No. of training days for all Instructors	Max No. of courses/year ref. Col.C	Number of Instructors to teach "x" courses
Initial Training Intro NavAids	6	4	12	60	2.5	0.65	129	321	5.4	4.7
Initial Training Radar Systems	8	4	20	100	3	0.65	129	386	3.9	9.3
Conversion Training Intro. To CNS	12	12	3	15	2	0.80	158	316	21.1	2.3
Conversion Training Data Comm.	8	10	4	20	2	0.70	138	277	13.8	2.9
Conversion Training The ATN	8	2	8	40	2.5	0.70	138	346	8.7	2.5
Management	12	3	3	15	2	0.80	138	277	18.5	2.0