



Workforce Development – Our Needs and Our Opportunities

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Perspectives

 Washington State Department of Transportation; Shoreline, WA



King County; Seattle, WA



University of Idaho; Moscow, ID



 Chair, ITE Transportation Education Council



Public Private

Salary
☑

Work Schedule / Pace

Job Security

✓

✓ Training

For:

Organization: 432306 - 405 Management Level: X - NON-MANAGEMENT

DOT-ROB424P4-A ** W.S.D.O.T. Automated Training Management Sy Jan 14, 2003



	Tob	Level: X - NON-MANAGEMENT Class: 66120 - TRANSP ENG 1 Matrix: ENGINEERING (DES D	Jan 14	1, 200	Recommended Training Plan For:	O _X	ocp.	artine		01
Course Code Hours		Course Titl	Manag	Job	zation: 432306 - 405 Level: C - ENTRY MANAGEMENT Class: WMS02 - WMS BAND 2 Matrix: ENGINEERING (DES DESIGN Group)					
		*** Recommended Ma								
LEADERS	SHIP &	MANAGEMENT TRAINING PLAN	Code	Hours	Course Title	Status	Pri	Date	a ?	IT
AAA	32	ENTRY MANAGEMENT DEVELOPMENT			*** Recommended Matrix ***			1878	,	6
TECHNIC	CAL/PR	OFESSIONAL TRAINING PLAN	LEADER	SHIP	MANAGEMENT TRAINING PLAN					
AC3	8	CN: EXCAVATION & EMBANKMENTS	AOX	7	MEETING MANAGEMENT CORRECTIVE ACTION ENHANCED LEADERSHIP FOR WSDOT TOM: TEAM LEADER TRAINING	@ NotTaken	1			
ADH	40	GEN: CONTRACT PLANS READING	AQC	8	CORRECTIVE ACTION	NotTaken	1			
AGH	16	DES: HYDRAULICS, HIGHWAY DRA SUR: BASIC SURVEYING (SELF-S		24	ENHANCED LEADERSHIP FOR WSDOT	NotTaken	1			
APK	16	DES: CONTRACT PLANS & ESTIMA	BIZ	24	TOM: TEAM LEADER TRAINING	NotTaken	S			
A4J A42	20	TR: WORKZONE TRAFFIC CONTROL	TECHNI	CAL/PI	OFESSIONAL TRAINING PLAN					
BCN	5	DES: RIGHT OF WAY PLANS PREP								
BGN	8	DES: CONTRACT PROVISION PREP	BBE	24	UW: DES-VALUE ENGINEERING FOR HIGHWAYS DES: MANAGING PROJECT DELIVERY	@ NotTaken	1			
BQD	8	TR: WORKZONE TRAFFIC SUPERVI	B71	16	DES: MANAGING PROJECT DELIVERY UW: DES-MANAGING SCOPE, SCHEDULE, AND BUDGET ENV: INTRO TO ENDANGERED SPECIES ACT & BIOLOG	NotTaken	1			3
BQU	16	SUR: CAICE SURVEY DATA PROCE	CAK CA1	24	ENV: INTRO TO ENDANGERED SPECIES ACT & BIOLOG	NotTaken	1	* +		
BRK	40	DES: DESIGN ACADEMY	CFN	8	UW: GEN-CONSULTANT ADMINISTRATION	NotTaken		0		
BT5	8	CAE: CAICE EARTHWORK CLASSIF CAE: CAICE INTERSECTION DESI	AH9	14	UW: GEN-LEGAL LIABILITY FOR TRANSPORTATION PR	~ Taken	i	Feb 0	17	1
BVF	7	TR: POWER SUPPLY DESIGN FOR	B89	24	UW: DES-ACCESS MANAGEMENT	NotTaken	2			.h
BZ8	11		EMBT OV	er med	DI ODMENTE MONTHAND DI NA					
BII	16	TR: ILLUMINATION DESIGN FOR	EMPLOX	BE DEV	ELOPMENT TRAINING PLAN				9 8	
B71	16	DES: MANAGING PROJECT DELIVE	AAO	7	TIME MANAGEMENT	NotTaken	7			
CAK	24	UW: DES-MANAGING SCOPE, SCHE	ACV	1.4	ORAL PRESENTATION TECHNIQUES	NotTaken	1			
CAY	2	ENV: EROSION CONTROL DESIGN	APN	14	STRESS MANAGEMENT	NotTaken	ī			
CA1	7	ENV: INTRO TO ENDANGERED SPE	APW	7	TIME MANAGEMENT ORAL PRESENTATION TECHNIQUES STRESS MANAGEMENT LISTENING SKILLS INTERPERSONAL COMMUNICATIONS CONFLICT MANAGEMENT WRITING MANAGEMENT WRITING MANAGERIAL LETTERS & MEMOS VIOLENCE THAT AFFECTS THE WORKPLACE ETHICAL STANDARDS REFRESHER RTHICAL STANDARDS	NotTaken	1			
CBD	8	DES: INTERSECTION AND PEDEST		14	CONFITCE MANAGEMENT	NotTaken	1			
CFU	8	DES: WSDOT INTERCHANGE DESIG CAB: CAICE ROADWAY DESIGN		14	WRITING MANAGERIAL LETTERS & MEMOS	NotTaken	1			
BQT	24 16	DES: ROADWAY GEOMETRIC DESIG	B9V	4	VIOLENCE THAT AFFECTS THE WORKPLACE	* Taken	1	Apr 0	2	1
B74	16	DES: ROADSIDE SAFETY	BYW	4	ETHICAL STANDARDS REFRESHER	* Taken	ī	Apr 0	0	1
CF4	6	DEC. THERODITOTION TO PROJECT	BKB	4	ETHICAL STANDARDS	* Taken	. 1	Jan 9	5	1
ACB	8	CN: HOT MIX ASPHALT PLACEMEN	SAFRTY	TOATN	TNG DIAN					
ACF	6	CN: DRAINAGE INSPECTATOR		TICALLA	ING PUAN					
ACM	24	CN: BRIDGE STRUCTURES INSPEC	APS	8	FIRST AID	* Taken	1	Jan 9	6	1
AI6	24	CAE: CADD OPERATOR TRAINING			Refresher APS NEEDED BY Jan 98 *** Non-Matrix courses ***		-			
API AX4	12	CN: ELECTRICAL-ILLUMINATION CAE: MICROSTATION - ENTRY LE			tot Ven Materia					
AX4 A2C	24	UW: GEN-BASIC HIGHWAY CAPACI			""" NON-MACTIX COURSES ***					
BC2	4	TR: SIGN LOCATION & INSTALLA	LEADERS	HIP &	MANAGEMENT TRAINING PLAN					
BKS	7	ENV: WETLANDS: RECOGNITION, R								
BK7		DES: STORMSHED (INTERMEDIATE	BT6	8	EDPP TRAINING FOR WSDOT SUPERVISORS	Taken	+	Jun 0	0 7	1
BML	24	UW: GEN-UNIFORM TRAFFIC CONT	RAA	12	EDPP TRAINING FOR WSDOT SUPERVISORS ENTRY MANAGEMENT DEVELOPMENT (DOP) TOM: MANAGING PROCESS IMPROVEMENT TOM: QUEST 2001, TEAM TECHNIQUES TOM: AMARENESS FOR EMPLOYEES & MANAGERS	* Taken		Sep 9'	7 1	1
BPW	12	ENV: CERTIFICATION IN CN SIT	BGU	24	TOM: OUEST 2001. TEAM TECHNIOUES	@ Taken		Jun 9		
BS3 BS4	24	UW: TR-FUNDAMENTALS OF TRAFF UW: TR-TRAFFIC ENGINEERING O	BKK	8	TOM: AWARENESS FOR EMPLOYEES & MANAGERS	@ Taken		Jun 96 Feb 96		
BUY	6	DES. STORMSHED (BEGINNING)		/				30	-	
BO2	16	DES: STORMSHED (BEGINNING) UW: GEN-ROADWAY CULVERT HYDR	RECHNIC	AL/PRO	DFESSIONAL TRAINING PLAN	**				
ABT	7	CN: PCC FIELD TESTING PROCED		16	DES. POADSIDE COMPEDENCE					
80000000	- 55		DIO	24	DES: ROADSIDE CONFERENCE GEN: RIVER MECHANICS FOR HIGHWAY DESIGN CAE: CAE OVERVIEW FOR MANAGERS DES: ROADSIDE SAFETY DES: HYDRAULICS, HIGHWAY DRAINAGE UW: DES-URBAN STREET DESIGN GEN: ARCVIEW GIS. INTRODUCTION TO (BEGINNING)	Regist		Jul 02	2	
EMPLOYE	EB DEV	ELOPMENT TRAINING PLAN	COL	6	CAE: CAE OVERVIEW FOR MANAGERS	Taken		Jul 02	, ,	
		THE REAL PROPERTY.	B74	16	DES: ROADSIDE SAFETY	Taken		Nov 01		
AAO	7	TIME MANAGEMENT	AGH	16	DES: HYDRAULICS, HIGHWAY DRAINAGE	Taken		Sep 01	1	I.
APN	14	STRESS MANAGEMENT	BOC	16	GEN. APOUTEN GIS INTEROPUCATION TO (PROTECTION)	Taken		Atter OT	1 7	10
APW ARO	14	INTERPRESONAL COMMUNICATIONS	BZS	24	CAS: CAS OVERVIEW FOR MANAGERS DES: ROADSIDE SAFETY DES: HYDRAULICS, HIGHWAY DRAINAGE UW: DES-URBAN STREET DESIGN GEN: ARCVIEW GIS, INTRODUCTION TO (BEGINNING) GEN: SYSTEMATIC DEVELOPMENT OF INFORMED CONSE GEN: S D I C -BRUSH-UP	Taken Taken		Mar 01	1	
OMA.	7.4	INTEREBROOME CONTOUTCHILD	BV5	8	GEN: S D I C -BRUSH-UP	Taken		May 00 Jul 99	1 1	
		(*)				a taregar	. !	our 35	-	5



Required KSAs

- Bachelor's Degree in Civil Engineering, or related field; or equivalent combination of (4) years of education and professional experience in transportation or traffic engineering
- Skill in applying sound engineering judgment under stressful situations to develop recommendations and make decisions
- Skill in communicating in a clear, concise, and coherent manner with diverse groups including community groups and general public
- Ability to understand and apply the Manual on Uniform Traffic Control Devices (MUTCD)
- Ability to use software programs such as Word, Excel, Access, and Outlook



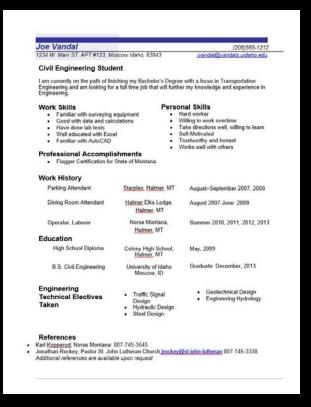
Desired KSAs

- FE (EIT) License, or within 3 months of employment develop a detailed personal plan and schedule to obtain license
- Knowledge of FHWA and AASHTO Guidelines, King County Road Standards, and WSDOT Design Manual
- Knowledge of traffic engineering principles, practices and methods
- Ability to learn and understand liability issues as they relate to traffic control and traffic accidents
- Ability to prepare and interpret technical reports



Senior Seminar (CE 491)

- Cover Letter / Resume
- Interview Questions
- Presentations / Public Speaking
- Writing Exercises
- Guest Speakers
 - Salary Negotiations
 - Ethics





ITE Transportation Education Council

- Focal point for identifying and addressing emerging and evolving needs of educational institutions
- Objectives
 - Initiate participation of educational institutions in ITE
 - Improve depth and breadth of services offered to institutions
 - Encourage representation of educational institutions in ITE
- Products
 - Syllabi for the first / introductory course in transportation engineering
 - Transportation Engineering Repository (Practical Problems)



ITE Transportation Education Council

- Employer-Standpoint Survey
 - What are employers looking for in prospective hires?
- Desired Traits
 - Willingness to learn
 - General analytical, writing, people skills
 - Ethics
 - Enthusiasm

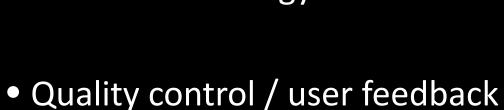


ITE Transportation Education Council

- Expectations
 - New hires will have taken an introductory transportation engineering course
 - Employer will provide training (technical, PE exam)
 - Hiring process includes assessment of writing and public speaking ability
 - Employer will pay a higher salary to those with a graduate degree

Looking Ahead

Role of technology



- Re-shaping academic curriculum
- Influences of globalization



Sources of Information

- Conferences
- Presentations
- Webinars
- Classes / Courses

- Trade Journals
- Handbooks
- Videos
- Colleagues
- Online Forums
- Vendors
- Self-Study



Questions?



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