# Classes ${\bf Administrative Staff}$ $AdministrativeStaff \sqsubseteq Employee$ Article $Article \sqsubseteq Publication$ ${\bf Assistant Professor}$ $Assistant Professor \sqsubseteq Professor$ AssociateProfessor $Associate Professor \sqsubseteq Professor$ $\mathbf{Book}$ Book $\sqsubseteq$ Publication Chair Chair $\equiv$ Person $\sqcap$ $\exists$ headOf Department Chair $\sqsubseteq$ Professor ClericalStaff ${\it ClericalStaff} \sqsubseteq {\it AdministrativeStaff}$ College $\textbf{College} \sqsubseteq \textbf{Organization}$ ${\bf Conference Paper}$ ${\bf Conference Paper} \sqsubseteq {\bf Article}$ Course $Course \sqsubseteq Work$ Dean

Dean  $\equiv \exists$  headOf College

 $\mathrm{Dean} \sqsubseteq \mathrm{Professor}$ 

Department
$\label{eq:Department} \mbox{Department} \sqsubseteq \mbox{Organization}$
Director
$\operatorname{Director} \equiv \operatorname{Person}  \sqcap  \exists  \operatorname{headOf}  \operatorname{Program}$
EducationalOrganization
Educational Organization $\sqsubseteq$ Organization
Employee
Employee $\equiv$ Person $\sqcap \exists$ worksFor Organization
Faculty
Faculty $\sqsubseteq$ Employee
FullProfessor
$Full Professor \sqsubseteq Professor$
GraduateCourse
$GraduateCourse \sqsubseteq Course$
GraduateStudent
$ \begin{array}{l} {\rm GraduateStudent} \sqsubseteq {\rm Person} \\ {\rm GraduateStudent} \sqsubseteq \exists \ {\rm takesCourse} \ {\rm GraduateCourse} \end{array} $
Institute
Institute $\sqsubseteq$ Organization
JournalArticle
$\label{eq:control} Journal Article \sqsubseteq Article$
Lecturer
Lecturer $\sqsubseteq$ Faculty
Manual
$Manual \sqsubseteq Publication$

Organization
Person
$\mathbf{PostDoc}$
$PostDoc \sqsubseteq Faculty$
Professor
$Professor \sqsubseteq Faculty$
Program
$Program \sqsubseteq Organization$
Publication
Research
$Research \sqsubseteq Work$
ResearchAssistant
$\begin{aligned} & Research Assistant \sqsubseteq Person \\ & Research Assistant \sqsubseteq \exists \ works For \ Thing \end{aligned}$
ResearchGroup
$Research Group \sqsubseteq Organization$
Schedule
Software
Software $\sqsubseteq$ Publication
Specification
Specification $\sqsubseteq$ Publication
Student
Student $\sqsubseteq$ Person Student $\sqsubseteq$ $\exists$ takesCourse Thing
Student $\sqsubseteq \exists$ takesCourse Thing
SystemsStaff

 $SystemsStaff \sqsubseteq AdministrativeStaff$ 

TeachingAssistant
$ \begin{array}{c} \text{TeachingAssistant} \sqsubseteq \text{Person} \\ \text{TeachingAssistant} \sqsubseteq \exists \text{ teachingAssistantOf Thing} \\ \end{array} $
TechnicalReport
$\label{eq:TechnicalReport} \ensuremath{TechnicalReport} \sqsubseteq Article$
Thing
UndergraduateStudent
$\label{eq:UndergraduateStudent} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$
University
University $\sqsubseteq$ Educational Organization
UnofficialPublication
Unofficial Publication $\sqsubseteq$ Publication
VisitingProfessor
$\label{eq:VisitingProfessor} VisitingProfessor \sqsubseteq Professor$
Work
Object properties
advisor
$\exists$ advisor Thing $\sqsubseteq$ Person $\top$ $\sqsubseteq$ $\forall$ advisor Professor
affiliateOf
$\exists$ affiliate Of Thing $\sqsubseteq$ Organization $\top$ $\sqsubseteq$ $\forall$ affiliate Of Person
affiliated Organization Of
$\exists \ affiliated Organization Of \ Thing \sqsubseteq Organization \\ \top \sqsubseteq \forall \ affiliated Organization Of \ Organization$

degreeFrom
<a href="http://www.lehigh.edu/zhp2/2004/0401/univ-bench.owl#degreeFrom"> <math display="inline">\equiv</math> <a href="http://www.lehigh.edu/zhp2/2004/0401">http://www.lehigh.edu/zhp2/2004/0401</a> bench.owl#hasAlumnus&gt;<math display="inline">^ \exists</math> degreeFrom Thing <math display="inline">\sqsubseteq</math> Person <math display="inline">\top</math> <math display="inline">\sqsubseteq</math> <math display="inline">\forall</math> degreeFrom University</a>
doctoralDegreeFrom
$ \sqsubseteq \text{degreeFrom} $ $ \exists \text{doctoralDegreeFrom Thing} \sqsubseteq \text{Person} $ $ \top \sqsubseteq \forall \text{doctoralDegreeFrom University} $
hasAlumnus

<http://www.lehigh.edu/zhp2/2004/0401/univ-bench.owl#degreeFrom>  $\equiv$  <http://www.lehigh.edu/zhp2/2004/0401/univ-bench.owl#degreeFrom>

bench.owl#hasAlumnus>- $\exists$  has Alumnus Thing  $\sqsubseteq$  University

 $\top \sqsubseteq \forall$ has Alumnus Person

#### headOf

 $\square$  worksFor

#### listedCourse

 $\exists$  listedCourse Thing  $\sqsubseteq$  Schedule  $\top \sqsubseteq \forall \ listedCourse \ Course$ 

#### mastersDegreeFrom

 $\sqsubseteq$  degreeFrom  $\exists \ mastersDegreeFrom \ Thing \sqsubseteq Person$  $\top \sqsubseteq \forall \ \mathrm{mastersDegreeFrom} \ \mathrm{University}$ 

### member

 $< http://www.lehigh.edu/\ zhp2/2004/0401/univ-bench.owl\#memberOf> \equiv < http://www.lehigh.edu/\ zhp2/2004/0401/univ-bench.owl#memberOf> \equiv < http://www.lehigh.edu/\ zhp2/2004/0401/univ-bench.owl#memberOf> = < ht$ bench.owl#member>  $\exists$  member Thing  $\sqsubseteq$  Organization  $\top \sqsubseteq \forall$  member Person

#### memberOf

 $< http://www.lehigh.edu/\ zhp2/2004/0401/univ-bench.owl\#memberOf> \equiv < http://www.lehigh.edu/\ zhp2/2004/0401/univ-bench.owl\#memberOf> \equiv < http://www.lehigh.edu/\ zhp2/2004/0401/univ-bench.owl\#memberOf> = < http://www.lehigh.edu/\ zhp2/2004/0401/univ-bench.owl#memberOf> = < ht$ bench.owl#member>

${ m org}{ m Publication}$
$\exists \ \mathrm{orgPublication} \ \mathrm{Thing} \sqsubseteq \mathrm{Organization} \\ \top \sqsubseteq \forall \ \mathrm{orgPublication} \ \mathrm{Publication}$
${\bf publication Author}$
$\exists \ publication Author \ Thing \sqsubseteq Publication \\ \top \sqsubseteq \forall \ publication Author \ Person$
publicationDate
$\exists$ publication Date Thing $\sqsubseteq$ Publication
publicationResearch
$\exists$ publication Research Thing $\sqsubseteq$ Publication $\top$ $\sqsubseteq$ $\forall$ publication Research Research
researchProject
$\exists \ research Project \ Thing \sqsubseteq Research Group \\ \top \sqsubseteq \forall \ research Project \ Research$
softwareDocumentation
$\exists \ software Documentation \ Thing \sqsubseteq Software \\ \top \sqsubseteq \forall \ software Documentation \ Publication$
softwareVersion
$\exists$ software Version Thing $\sqsubseteq$ Software
${\bf subOrganizationOf}$
TransitivePropertysubOrganizationOf $\exists$ subOrganizationOf Thing $\sqsubseteq$ Organization $\top \sqsubseteq \forall$ subOrganizationOf Organization
takesCourse
teacherOf

 $\exists \ teacherOf \ Thing \sqsubseteq Faculty \\ \top \sqsubseteq \forall \ teacherOf \ Course$ 

## teaches teaching Assistant Of $\exists \ teaching Assistant Of \ Thing \sqsubseteq Teaching Assistant$ $\top \sqsubseteq \forall \ teachingAssistantOf \ Course$ tenured $\exists$ tenured Thing $\sqsubseteq$ Professor undergraduate Degree From□ degreeFrom $\exists$ undergraduate Degree<br/>From Thing $\sqsubseteq$ Person $\top \sqsubseteq \forall \ undergraduateDegreeFrom \ University$ worksFor⊑ worksFor\_rg worksFor\_rg $\sqsubseteq$ memberOf Data properties age $\exists$ age Datatypehttp://www.w3.org/2000/01/rdf-schema#Literal $\sqsubseteq$ Person emailAddress $\exists$ emailAddress Datatypehttp://www.w3.org/2000/01/rdf-schema#Literal $\sqsubseteq$ Person name officeNumber researchInteresttelephone $\exists$ telephone Datatypehttp://www.w3.org/2000/01/rdf-schema#Literal $\sqsubseteq$ Person title $\exists$ title Datatypehttp://www.w3.org/2000/01/rdf-schema#Literal $\sqsubseteq$ Person

### Individuals

### Datatypes

PlainLiteral