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| WI Youth Apprenticeship Logo | Architectural Drafting and Planning  Youth Apprenticeship |

# architectural Drafting and planning

Youth apprentices develop the skills needed to read, edit, and create architectural drawings. In the second year, youth apprentices expand their skills in developing specific residential and/or commercial design pieces.

**Length of Apprenticeship:** One or two years

# required Competencies

Youth apprentices must become proficient in both general employability and occupation-specific competencies. All of these, and examples of how each can be demonstrated, are found in the following pages. **Year 1**: A total of 10 competencies must be learned for this occupation. **Year 2**: An additional 10 competencies must be learned for this occupation. Employers may substitute out one competency and should write in the competency they are adding. Where necessary, skills can be simulated. Youth apprentices must be evaluated on these competencies at least two times each year of their apprenticeship.

|  |  |
| --- | --- |
| **Architectural Drafting Competencies Year 1** | **Architectural Planning Competencies Year 2** |
| 1. Interpret technical drawings 2. Use measuring devices 3. Perform file management tasks 4. Copy documents and plans 5. Research building codes and site requirements 6. Compile site data 7. Use design software 8. Develop drawings such as plans, elevations, and sections 9. Apply basic annotation to drawings 10. Dimension drawings | 1. Create a floor plan 2. Draw a site plan 3. Draw a floor system and foundation plan 4. Draw sectional views 5. Draw elevation views 6. Develop a stair section drawing 7. Revise drawings 8. Create interior elevations 9. Create schedules 10. Create presentation drawings |

# Post-Secondary Pathway Opportunities

There are several post-secondary pathway opportunities in this area. The following is a partial list.

* Architectural Design and Technology
* Interior Design
* Architectural Structural Engineering Technology

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| WI Youth Apprenticeship Logo | Architectural Drafting and Planning  Youth Apprenticeship  On-the-Job Learning Performance Standards Guide |

# Youth Apprentice informatioN

|  |
| --- |
| Youth Apprentice Name |
| YA Coordinator |
| YA Consortium |
| School District |

# SIGNATURES

The On-the-Job Learning Performance Standards Guide includes a list of competencies youth apprentices learn through mentoring and training at the worksite.

Instructions for the Worksite Employers/Mentors and School-Based or YA coordinators: This document should be reviewed with the employer/mentor, school-based or YA coordinator on a regular basis with the youth apprentice to record progress and plan future steps to ensure completion of the required competencies. Mentors, school-based/YA coordinator, and the apprentice sign below.

**Employer/Mentor**

**1st Evaluation (Required) 2nd Evaluation (Required)**

|  |  |
| --- | --- |
| Employer/Mentor Signature | Employer/Mentor Signature |
| Employer/Mentor | Employer/Mentor |
| Business/Company | Business/Company |
| Date Signed | Date Signed |

**3rd Evaluation (Optional) 4th Evaluation (Optional)**

|  |  |
| --- | --- |
| Employer/Mentor Signature | Employer/Mentor Signature |
| Employer/Mentor | Employer/Mentor |
| Business/Company | Business/Company |
| Date Signed | Date Signed |

**School-Based and/or YA Coordinator**

**1st Evaluation (Required) 2nd Evaluation (Required)**

|  |  |
| --- | --- |
| School-Based and/or YA Coordinator Signature | School-Based and/or YA Coordinator Signature |
| School-Based and/or YA Coordinator | School-Based and/or YA Coordinator |
| School District or Organization | School District or Organization |
| Date Signed | Date Signed |

**3rd Evaluation (Optional) 4th Evaluation (Optional)**

|  |  |
| --- | --- |
| School-Based and/or YA Coordinator Signature | School-Based and/or YA Coordinator Signature |
| School-Based and/or YA Coordinator | School-Based and/or YA Coordinator |
| School District or Organization | School District or Organization |
| Date Signed | Date Signed |

**Youth Apprentice**

**1st Evaluation (Required) 2nd Evaluation (Required)**

|  |  |
| --- | --- |
| Youth Apprentice Signature | Youth Apprentice Signature |
| Youth Apprentice | Youth Apprentice |
| School District / High School | School District / High School |
| Date Signed | Date Signed |

**3rd Evaluation (Optional) 4th Evaluation (Optional)**

|  |  |
| --- | --- |
| Youth Apprentice Signature | Youth Apprentice Signature |
| Youth Apprentice | Youth Apprentice |
| School District / High School | School District / High School |
| Date Signed | Date Signed |

# employability Skills

All youth apprentices must demonstrate the key employability skills listed below in order to complete the YA program. They do so by earning at least a "Meets Expectation" rating in each. **At least two evaluations are required each year of a youth apprenticeship.**  More columns are included below for those who choose to conduct more frequent reviews.

|  |  |
| --- | --- |
| **1** | ***Working to Meet Expectations:*** Needs improvement; requires much assistance and supervision; rarely displays this behavior |
| **2** | ***Meets Expectations:***  Meets entry-level criteria; requires some supervision; often displays this behavior |
| **3** | ***Exceeds Expectations:*** Exceeds entry-level criteria; requires minimal supervision; consistently displays this behavior |

|  | **Employability Skills** | **Rating** | | | |
| --- | --- | --- | --- | --- | --- |
| **Competency and Rating Criteria** | | **Initial** | **Mid Year 1** | **Mid Year 2** | **Final** |
| 1. Develops positive work relationships with others.   *Examples of qualities and habits that the employee might exhibit include:*   * Interacts with others with respect and in a non-judgmental manner * Responds to others in an appropriate and non-offensive manner * Helps co-workers and peers accomplish tasks or goals * Applies problem-solving strategies to improve relations with others * When managing others, shows traits such as compassion, listening, coaching, team development, and appreciation | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Communicates effectively with others   *Examples of qualities and habits that the employee might exhibit include . . .*   * Adjusts the communication approach for the target audience, purpose, and situation to maximize impact * Organizes messages/information in a logical and helpful manner * Speaks clearly and writes legibly * Models behaviors to show active listening * Applies what was read to actual practice * Asks appropriate questions for clarity | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Collaborates with others   *Examples of qualities and habits that the employee might exhibit include . . .*   * Works effectively in teams with people of diverse backgrounds regardless of sex, race, ethnicity, nationality, sexuality, religion, political views, and abilities * Shares responsibility for collaborative work and decision making * Uses the problem-solving process to work through differences of opinion in a constructive manner to achieve a reasonable compromise * Avoids contributing to an unproductive group conflict   Shares information and carries out responsibilities in a timely manner | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Maintains composure under pressure   *Examples of qualities and habits that the employee might exhibit include . . .*   * Uses critical thinking to determine the best options or outcomes when faced with a challenging situation * Carries out assigned duties while under pressure * Acts in a respectful, professional, and non-offensive manner while under pressure * Applies stress management techniques to cope under pressure | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Demonstrates integrity   *Examples of qualities and habits that the employee might exhibit include . . .*   * Carries out responsibilities in an ethical, legal and confidential manner * Responds to situations in a timely manner * Takes personal responsibility to correct problems * Models behaviors that demonstrate self-discipline, reliability, and dependability | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Performs quality work   *Examples of qualities and habits that the employee might exhibit include . . .*   * Carries out written and verbal directions accurately * Completes work efficiently and effectively * Performs calculations accurately * Conserves resources, supplies, and materials to minimize costs and environmental impact * Uses equipment, technology, and work strategies to improve workflow * Applies problem-solving strategies to improve productivity * Adheres to worksite regulations and practices * Maintains an organized work area | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Provides quality goods or services (internal and external)   *Examples of qualities and habits that the employee might exhibit include . . .*   * Shows support for the organizational goals and principles by own personal actions * Displays a respectful and professional image to customers * Displays an enthusiastic attitude and desire to take care of customer needs * Seeks out ways to increase customer satisfaction * Produces goods to workplace specifications | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Shows initiative and self-direction   *Examples of qualities and habits that the employee might exhibit include . . .*   * Prioritizes and carries out responsibilities without being told * Responds with enthusiasm and flexibility to handle tasks that need immediate attention * Reflects on any unsatisfactory outcome as an opportunity to learn * Improves personal performance by doing something different or differently * Analyzes how own actions impact the overall organization * Supports own action with sound reasoning and principles * Balances personal activities to minimize interference with work responsibilities | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Adapts to change   *Examples of qualities and habits that the employee might exhibit include . . .* Shows flexibility and willingness to learn new skills for various job roles   * Uses problem-solving and critical-thinking skills to cope with changing circumstances * Modifies own work behavior based on feedback, unsatisfactory outcomes, efficiency, and effectiveness * Displays a "can do" attitude | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Demonstrates safety and security regulations and practices   *Examples of qualities and habits that the employee might exhibit include . . .*   * Follows personal safety requirements * Maintains a safe work environment * Demonstrates professional role in an emergency * Follows security procedures * Maintains confidentiality | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Applies job-related technology, information, and media   *Examples of qualities and habits that the employee might exhibit include . . .*   * Applies technology effectively in the workplace * Assesses and evaluates information on the job * Assesses training manuals, website, and other media related to the job | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Fulfills training or certification requirements for employment   *Examples of this requirement may include . . .*   * Participation in required career-related training and/or educational programs * Passing certification tests to qualify for licensure and/or certification * Participation in company training or orientation | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. Sets personal goals for improvement   *Examples of this requirement may include . . .*   * Setting goals that are specific and measurable * Setting work-related goals that align with the organization's mission * Identifying strategies to reach goals * Reflecting on goal progress to regularly evaluate and modify goals | | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |

# YEAR 1 occupational Competencies (TO BE COMPLETED BY yA EMPLOYER/MENTOR)

Youth apprentices must earn a rating of at least "MEETS EXPECTATIONS" in each competency by the conclusion of the apprenticeship. A total of 10 competencies, 9 must be from the list below. If necessary, employers can substitute one competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment.  **At least two evaluations are required each year of a youth apprenticeship.** More columns are included below for those who choose to conduct more frequent reviews.

|  |  |
| --- | --- |
| **1** | ***Working to Meet Expectations:*** Needs improvement; requires much assistance and supervision; rarely displays this behavior |
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| **3** | ***Exceeds Expectations:*** Exceeds entry-level criteria; requires minimal supervision; consistently displays this behavior |

| **Occupational Competencies** | **Ratings** | | | |
| --- | --- | --- | --- | --- |
| **Competency and Rating Criteria** | **Year 1 Evaluation**  **Minimum Rating of 2 EACH**  **Check Rating** | | | |
| **Initial** | **Mid Year 1** | **Mid Year 2** | **Final** |
| Interpret technical drawings  * locate information in the drawing * identify lines, views, symbols, and representations * interpret dimensions and scale | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. **Use measuring devices**  * select appropriate measuring device * calibrate device if needed * obtain an accurate reading * record measurements using proper symbols * utilize a metric scale | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| 1. **Perform file management tasks**  * follow the company’s organizational system for both paper and digital files * search for files * find and open files * copy files * rename or add filenames to files | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Copy documents and plans  * operate copy machines * operate printers, plotters, and scanners | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Research building codes and site requirements  * determine categories of applicable codes required by site, systems, and structures * locate resources to conduct code and site research * look up codes, zoning ordinances and regulations to determine the applicable requirements for a project | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Compile site data  * develop a site base drawing * document property lines * analyze the grade * investigate setbacks and other site restrictions | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Use design software  * demonstrate view use in design software * draw objects that match given designs * import/export drawings to/from various graphic formats * convert an existing hard copy drawing to an electronic format * select appropriate scale * apply naming conventions, line types, and object management to drawing * apply notes and/or leaders to drawing * apply lettering, fonts, line thickness and type | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Develop drawings such as plans, elevations, and sections  * select proper views * utilize view range properties to show pertinent information * use model lines and details lines to supplement two dimensional views as necessary * show hidden features and centerlines as required * utilize sheet and title block features | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Apply basic annotation to drawings  * apply common rules for font size * place dimension and extension lines * apply adequate drawing notations * use appropriate abbreviations * place notes appropriately | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Dimension drawings  * dimensions are drawn with the appropriate line leaders of the correct weight * dimensions are placed according to convention * dimensions supply all needed measurements | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Competency Substitute (if you replaced a competency above, note the competency and rating) | **1**  **2**  3 | **1**  **2**  3 | **1**  **2**  3 | **1**  **2**  3 |
| **Comments**: | | | | |

# YEAR 2 Occupational COMPETENCIES (TO BE COMPLETED BY yA EMPLOYER/MENTOR)

Youth apprentices must earn a rating of at least "MEETS EXPECTATIONS" in each competency by the conclusion of the apprenticeship. A total of 10 competencies, 9 must be from the list below. If necessary, employers can substitute one competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment. **At least two evaluations are required each year of a youth apprenticeship.** More columns are included below for those who choose to conduct more frequent reviews.

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| **3** | ***Exceeds Expectations:*** Exceeds entry-level criteria; requires minimal supervision; consistently displays this behavior |

| **Occupational Competencies** | **Ratings** | | | |
| --- | --- | --- | --- | --- |
| **Competency and Rating Criteria** | **Year 2 Evaluation**  **Minimum Rating of 2 EACH**  **Check Rating** | | | |
| **Initial** | **Mid Year 1** | **Mid Year 2** | **Final** |
| Create a floor plan  * lay out exterior limits of structure * block out exterior and interior walls with appropriate thickness * indicate openings in exterior and interior walls * draw door and window sizes * draw other floor plan features * add dimensions, notes and room labels * draw material symbols * indicate scale of drawing and view title * indicate north arrow | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Draw a site plan  * compile site measurements and other data * analyze measurement, service, utility, zoning and coding, and ecosystem data with worksite professional * select size and scale for plan * identify parcel features * indicate modifications of any existing site elements * place proposed structure on site with favorable orientation considering site-specific information * estimate the amount of cut and/or fill necessary to build a structure * estimate the increase in storm water runoff from a site * indicate scale of drawing and view title * indicate north arrow | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Draw a floor system and foundation plan  * contains structural components sized for the design * includes dimensions, scale, notes, labels, and view title * indicates symbols and references * indicates north arrow | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Draw sectional views  * indicate finished floor level(s) * indicate finished ceiling level(s) * detail windows and doors components * letter wall and roof finishes, roof pitch, chimney, decks, and porches * add dimensions, scale, notes, labels, and view title * indicate true width of walls * indicate all openings in interior or exterior walls * indicate typical sections of standard built-in features * note wall materials or finish * indicate fixtures, built-ins, trim and molding, and utilities | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Draw elevation views  * draw grade line * project construction lines from plans * indicate finished floor level(s) * draw windows and doors * draw roof outline * letter wall and roof finishes, roof pitch, chimney, decks, windows, and porches * add dimensions, scale, notes, labels, and view title * indicate all openings in exterior walls * indicate typical sections * note exterior wall materials or finish * show property line * show mechanical items | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Develop a stair section drawing  * draw finished floor and finished ceiling lines heights * calculate and lay out risers, treads, and landings * indicate framing around stairs * identify materials used to construct stairs * draw trim features * dimension total rise and run * indicate headroom clearance and stairwell opening * add dimensions, notes, and labels | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Revise drawings  * make modifications to drawing * track revisions | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Create interior elevations  * place elevation markers * crop and individualize elevations * tag interior design features and finishes * tag plumbing fixtures * tag lighting | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Create schedules  * layout window schedules * layout door schedules | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Create presentation drawings  * rendering shows landscape components * rendering shows interior and exterior surface textures * rendering shows shadows * rendering contains camera views to depict 3D model * presentation contains color * presentation shows legend | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| Competency Substitute (if you replaced a competency above, note the competency and rating) | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** | **1**  **2**  **3** |
| **Comments**: | | | | |

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