



ARDR-ARCH Advisory Committee Minutes, Fall 2023

Date: October 18, 2023

Number of Attendees: 17

Called to order: 12:00 pm

Adjourned: 1:30 pm

Chairperson: Bruce Gunderson

Recorder: Jennifer Woods

Location: CNM Advanced Tech Center and Zoom

Members present from industry: Bruce Gunderson, Hartman Majewski Design Group; Jaime Hernandez, Future Focused Education; George Kerr, APS CTE; Aaron Ketner, DPS, Dir. Sustainability; Mike May, Future Focused Education; Anne Martinez, Design Group NM; Laura Suazo, Bohannon Huston, Learning Coordinator; Tynn Waters, Design Group NM; Russell Worf, DPS BIM Manager

Members present from CNM: Joseph Andrade, Instructor; Amy Byers, CTE Recruitment Mgr.; Lindsey Fromm, ARTS Instructor, Signage Research; Eric Ghahate, CM Instructor, Design Cluster Chair; Jackie Lamoureux, Interim Assoc. Dean; David Miertschin, Instructor; Mary Silentwalker, CNM Workforce and Community Success; Jennifer Woods, Academic Tech Assistant

Next scheduled meeting: To Be Decided for Spring

I. Welcome/Introductions: Bruce started the meeting and everyone introduced themselves.

II. Minutes: Minutes from the spring 2023 meeting approved as is.

III. Reports: Jackie reported: CNM is in the process of hiring a new VP of Education and Learning. When that person is identified, then we will start the search for a new Dean and two Associate Deans for STA. There is a local election coming up in November. On the ballot is a local bond for \$80 mill that if passed, will help CNM upgrade and build facilities on campus. Our strategic direction is being changed for 2024 to 2026 to *Create Our Future Together*. By December this will be implemented by our governing board. In June we broke ground for the new 60,000 sf. trades building on Main Campus. The opening will be in 2025. ARDR and ARCH will be staying here at the ATC.

In fall of 2023 our graduation numbers went up for ARDR, ARCH and the certificate program.

There was a pre-ARCH event on October 4 here at the ATC, which hosted families and students, which was a great turnout. Thanks To David M. for pulling that together.

IV. Old Business Software update: David said we teach AutoCAD, Revit, Bluebeam, SketchUp. We are still not using BIM 360. Joseph said he now has read/write capabilities in cloud-based programs. Students are using Revit in a more collaborative way by forming teams. Bruce commented that this is a great thing. Local networks are not as crucial to the job as they once were.

On November 16, there will be an info session for the ARDR/ARCH program which is being coordinated by the recruitment team. Amy said this is geared toward high school students who may not be aware of what these programs are all about. Invitations were sent out to all the schools in APS and surrounding areas. The invitation is also being sent to past CNM students who may have dropped out, or have applied to CNM but did not register for classes. Eric gave some insights into how students are thinking nowadays about the education they want and how school can be slotted into their daily lives. DPS is known for hiring our students.



School of Skilled Trades & Arts

There will also be a pair of VR Goggles available at this event, so students can try them out. Our faculty are hoping that this will be a successful event, and would like to be more in the loop about logistics. Mike May mentioned that he could help with inviting certain groups of students, such as interns, who would be available to answer questions.

David M talked about the curriculum overhaul that happened about two years ago. Basically, we went from a 5-term sequential program, with specialized faculty teaching only certain terms, to a reformulated curriculum, largely fueled by the Covid epidemic. The terms are now set up so they are non-sequential. The first term runs every semester, and is the pre-requisite for all the other terms. The rest of the terms are not in any sequence, so students can take them in any order. David commented on whether or not this has been successful. He thinks that the students are not receiving the depth of knowledge that they need to achieve success. The reasons vary. One is that during Covid, students got out of the habit of spending all day working on an academic goal. Also, learning the software requires time to stay focused, and there may not be enough time during each term to devote to learning the software. In the upper division classes, the instructors have to deal with catch-up. Some students are missing key fundamental information. David wants to offer a special topics course this summer. This would require additional faculty, which is a different problem.

Joseph said that he exposes his students to a lot of different content in all areas of the construction industry in his construction documents class. He also directs his students to use our extensive library of plan documents in order to reorganise the documents according to national standards.

V. New Business: Jackie talked about the difficulty we are having hiring new part-time faculty. We know that night classes are a good idea, but we can't find anyone to teach them. She appealed to the members present for any information on someone who would be available to teach. David said that he thinks ARDR 1116 needs to come back as an on-line course, but we need faculty to teach it, and David is overloaded at this point. Mike suggested that perhaps there could be a rotation of company professionals who could come in and teach during part of a term.

Amy talked about the WCS. They are putting on a skilled trades event on Main Campus today. The WCS is the department that our industry partners can go to in order to place job postings, create apprenticeships, job shadowing, internships. Mary explained that she is involved in creating work-based opportunities. employersupport@cnm.edu. All internships are paid. All CNM students are able to use the services of the WCS. The WCS will vet all job postings to make sure the job fits the demographics of our students. Bruce mentioned that job postings are not used by architectural professionals, because hiring happens through word of mouth, which is always the way this profession has been. Tymn drew a distinction between a job and a career. The architecture profession is a life-long career and learning process.

Mike May mentioned that he is involved in an intermediary position between young people and industry.

VI. Reports from Industry Members: The members present aired a lot of their thoughts throughout this meeting.

The members are encouraged to spend a few minutes filling out the survey (links below). Also, a copy of the learning outcomes for this program is attached to these minutes.

Addenda: ARDR/ARCH Learning Outcomes

Commentary on Learning Outcomes by Aaron Ketner – 10/18/2023

VII. Adjournment: 1:30 pm

<https://bit.ly/cnmadvisory>



FALL 2023 Advisory

Learning Outcomes:

Architectural/Engineering Drafting Technology, Associate of Applied Science

Upon successful completion of this program, the students will be able to:

1. **Computer Aided Drafting:** Student will be able to produce fundamental architectural /engineering drawings for use in construction.
2. **Material and Methods:** Student will demonstrate a working knowledge of the terms and designations for typical construction materials, an understanding of their source, processing, and installation as part of building systems.
3. **Construction Drawings:** Student will be able to produce fundamental architectural/engineering drawings for use in construction.
4. **Problem Solving:** Student will demonstrate a systematic approach to problem solving in the professional architectural/engineering environment.
5. **Professional Practice:** Student will have the ability to participate in an architectural/engineering professional office simulation, exhibit workplace behavior, and work in a team environment.

Commercial Building Systems Design Coordination, Certificate of Completion

Upon successful completion of this program, the students will be able to:

Learning Objectives—1400 Level:

1. **Computer Aided Drafting:** Student will use software with entry level proficiency to create, edit, share, and output construction documentation in load-bearing wall commercial development.
2. **Material and Methods:** Student will demonstrate a working knowledge of the terms and designations for load-bearing wall commercial construction materials, an understanding of their source, processing, and installation as part of building systems.
3. **Construction Drawings:** Student will be able to produce fundamental architectural/engineering drawings at an entry level competence for use in loadbearing wall commercial construction.
4. **Problem Solving:** Student will demonstrate an entry level approach to problem solving in the professional architectural/engineering environment.

Commercial Development Design Coordination, Certificate of Completion

Upon successful completion of this program, the students will be able to:

Learning Objectives—1300 Level:

1. **Computer Aided Drafting:** Student will use software with entry level proficiency to create, edit, share, and output construction documentation in steel-framed commercial development.
2. **Material and Methods:** Student will demonstrate a working knowledge of the terms and designations for steel-framed commercial construction materials, an understanding of their source, processing, and installation as part of building systems.
3. **Construction Drawings:** Student will be able to produce fundamental architectural/engineering drawings at an entry level competence for use in steel framed commercial construction.
4. **Problem Solving:** Student will demonstrate an entry level approach to problem solving in the professional architectural/engineering environment.

Residential Development Design Coordination, Certificate Completion

Upon successful completion of this program, the students will be able to:

Learning Objectives—1200 Level:

1. **Computer Aided Drafting:** Student will use software with entry level proficiency to create, edit, share, and output construction documentation in residential development.
 2. **Material and Methods:** Student will demonstrate a working knowledge of the terms and designations for residential construction materials, an understanding of their source, processing, and installation as part of building systems.
 3. **Construction Drawings:** Student will be able to produce fundamental architectural/engineering drawings at an entry level competence for use in residential light wood-framed construction.
 4. **Problem Solving:** Student will demonstrate an entry level approach to problem solving in the professional architectural/engineering environment.
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Pre-Architecture, Associate of Applied Science

Upon successful completion of this program, the students will be able to:

1. Create multi-view, para-line, and perspective views, renderings, and physical models of original architectural designs for design conceptualization, schematic development, and presentation
2. Initiate, conceptualize, critique, develop, and present precedents and original concepts and designs.
3. Address architectural problems or program, anthropometry, site and natural context, historical and cultural context, the public interest, material
4. Create designs with specific architectural conceptual goals and physical intention.

(contributed by Aaron Ketner - 10-18-2023)

Learning Outcomes:

this needs to revise to add focus on development of 3D models to aid a complete BIM process

"...software with entry level proficiency to create, edit, share and output a construction document level of development 3D model..." Or something that illustrates their ability to produce a LOD300+ model that is consumable by a contractor or other.

Architectural/Engineering Drafting Technology, Associate of Applied Science

Upon successful completion of this program, the students will be able to:

1. Computer Aided Drafting: Student will be able to produce fundamental architectural/engineering drawings for use in construction.
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5. Professional Practice: Student will have the ability to participate in an architectural/engineering professional office simulation, exhibit workplace behavior, and work in a team environment.

why is this same as #3...

Future proofing: Needs to have intro to computation and automations.

Given the name, there should be an objective around coordination with other disciplines. Use of Coordination tools in BIM.

Commercial Building Systems Design Coordination, Certificate of Completion

Upon successful completion of this program, the students will be able to:

Learning Objectives—1400 Level:

1. Computer Aided Drafting: Student will use software with entry level proficiency to create, edit, share, and output construction documentation in load-bearing wall commercial development.
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3. Construction Drawings: Student will be able to produce fundamental architectural/engineering drawings at an entry level competence for use in loadbearing wall commercial construction.
4. Problem Solving: Student will demonstrate an entry level approach to problem solving in the professional architectural/engineering environment.

Commercial Development Design Coordination, Certificate of Completion

Upon successful completion of this program, the students will be able to:

Learning Objectives—1300 Level:

1. Computer Aided Drafting: Student will use software with entry level proficiency to create, edit, share, and output construction documentation in steel-framed commercial development.
2. Material and Methods: Student will demonstrate a working knowledge of the terms and designations for steel-framed commercial construction materials, an understanding of their source, processing, and installation as part of building systems.
3. Construction Drawings: Student will be able to produce fundamental architectural/engineering drawings at an entry level competence for use in steel framed commercial construction.
4. Problem Solving: Student will demonstrate an entry level approach to problem solving in the professional architectural/engineering environment.

Residential Development Design Coordination, Certificate Completion

Upon successful completion of this program, the students will be able to:

Learning Objectives—1200 Level:

1. **Computer Aided Drafting:** Student will use software with entry level proficiency to create, edit, share, and output construction documentation in residential development.
 2. **Material and Methods:** Student will demonstrate a working knowledge of the terms and designations for residential construction materials, an understanding of their source, processing, and installation as part of building systems.
 3. **Construction Drawings:** Student will be able to produce fundamental architectural/engineering drawings at an entry level competence for use in residential light wood-framed construction.
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1. Create multi-view, para-line, and perspective views, renderings, and physical models of original architectural designs for design conceptualization, schematic development, and presentation
2. Initiate, conceptualize, critique, develop, and present precedents and original concepts and designs.
3. Address architectural problems or program, anthropometry, site and natural context, historical and cultural context, the public interest, material
4. Create designs with specific architectural conceptual goals and physical intention.

Would be cool to see CNM ARDR and CNM Pre-Arch / UNM Arch collaborate on a final project to produce working documents... but emulate a real office with "Architect" working with "BIM techs" to produce a 3D model to coordinate in 3D and complete a drawing set... maybe the instructor is the PM and the Pre-Arch student is the PA