

How Much Orchestration Can You Really Teach in Just One Semester?

By Peter Lawrence Alexander

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I write this White Paper as a product of the university system who, after graduation, decided to go to the “big city” (Los Angeles) and make it, and discovered, to use an aerospace term, that I was far behind the power curve and had a lot of catching up to do.

This wasn't just my experience, either. I arrived around the same time as a lot of other talented composers who came from major music schools, minor music schools, and local four year state schools, who like myself, also only had one semester of orchestration.

You could divide us into two groups. The smallest subset knew Finale very well and often did copying for major composers or copy houses, where they learned orchestration through the ancient art of copying someone else's score!

The second group, of which I was a part, sought out mentors. Many of us found Dr. Albert Harris (a noted orchestrator, and the composer of a work for Andres Segovia that was nominated for a Pulitzer Prize) and Jack Smalley, who now heads up Film Composition at the University of Southern California (and the Two-Day Film Scoring Programs for Alexander Publishing).

I was fortunate to study with both. I also worked with Henry Mancini for three years and understudied on the scoring stage for three years with Jerry Goldsmith, most often remembered for his scores for the *Star Trek* movies and TV themes, the original *Planet of the Apes*, and 300 others.

Both Hank and Jerry had been mentored by the same two teachers after World War II, Mario Castelnuevo-Tedesco and Ernst Krenek.

When you're working with two of the top film composers of the 20th Century, you learn best by keeping your mouth shut and doing a lot of listening. With Hank, I got to ask exactly two questions and I got one score from him. With Jerry, I got to ask exactly zero questions (as in 0), but I came home from various movies with stacks of cues with the assumption that I would go through them and learn without having to ask and bug him. I did, and I still do!

But this was a multi-year process, and not just for me. Every so often you'd find someone who'd put your nose in a direction. The one first I credit for that is a man known by those only in Hollywood, Herb Spenser who orchestrated for John Williams. I had exactly one conversation with Herb, and that was right after *Raiders of the Lost Ark* was released. And that conversation ultimately led me to create the *Professional Orchestration*TM series of texts. In that one conversation, he said, “Peter, if you want to be successful, you have to know about a thousand devices.” Once I grasped this, my real orchestration studies began, and continue, because there's always something to learn.

This brings us back to this White Paper's question, “How much orchestration can you really teach in one semester?”

To answer this question, I started out with my experience along with that of other friends of mine who routinely orchestrate and arrange in Los Angeles.

Next, I examined nearly two-dozen orchestration syllabi to see what was being taught in colleges today.

Finally, I looked at the ever-changing industry demands and compared them to what I saw is being taught in today's colleges.

The Situation in Colleges Today

I see three issues.

Across the USA and in other countries, orchestration is only taught as a one semester, two credit-hour class, the majority of the time, in the senior year, with a few schools offering a string writing class in the Senior semester.

If we put our cards on the table, then we have to acknowledge that nearly 95% or more of all students in an orchestration class will never hear their required final project performed by live symphony orchestra, even a student one.

Excluding some experience with Finale or Sibelius, the majority of students will graduate with no exposure to or experience with electronic scoring (sequencing and recording) with such programs on the PC as Cubase or Sonar, or Apple Logic and Digital Performer on the Mac.

Defining Time

A military drill instructor has six-weeks with recruits running a 20-hour day, 7-days a week. This works out to be about 840 hours of training time.

By comparison, a college orchestration teacher has an average of 24 class hours, or 1/35 of the time a military drill instructor has with his trainees.

What's Typically Covered in 24 Hours

When I examined the various syllabi, I saw a fairly consistent pattern of x class meetings on the strings, x meetings on the woodwinds, x meetings on the brass and percussion, then various writing assignments, including some transcription work, culminating in the final project which is a full orchestration. Within this, some teachers required their students to turn their projects in using Finale or Sibelius. Only a few required attendance at various school or neighboring school concert events.

Because of the consistent pattern of instruction, it looks to me that this is probably the work plan probably from a workbook.

Defining What's Really Being Taught

Having not sat in the classroom for over (gulp!) thirty years for an orchestration course, I have the advantage of time and distance to coldly look at what's really being taught. When we look at the books labeled "orchestration" (and I'm including Volume 1 of my own series *Professional Orchestration* in this overview), we have to be brutally frank and state that none of these books are teaching orchestration. What they *are* teaching is instrumentation. Consequently, as I see it, what's really being taught is instrumentation with, to use a football term, a hurry-up offense to include some orchestration, too.

In observing this, I'm not criticizing. But what's apparent to me is that given the amount the student has to do in one semester, it's pretty clear that while it's unspoken, just about every instructor knows that one semester isn't enough.

Having said that, then let's "get real" and acknowledge that a minimum of two semesters of instruction is really needed. The first semester covers instrumentation, with the second covering orchestration, which is learning those 1000 devices Herb Spencer told me I needed to learn.

But even with this acknowledgement, we still must answer the original question, "How much orchestration can you really teach in just one semester?"

The honest answer is, "A fair amount," provided you alter the teaching model.

So let's see what we can teach that will have significant impact on a student's career outside academia.

What First Must Be Taught

I think you're going to be surprised at my answer. First and foremost, with approximately 24 hours of class time, a student must be taught *how to teach himself*. This is *the* key success tool. To teach himself, the student needs to be able to do some basic conducting, score read, and most important, score reductions. These are the key tools to success. Ranges, bowings, and fingerings can be looked up. That's memorization. Learning to score read and do score reductions is not just a skill, it's a gradable skill.

Every volume in our *Professional Orchestration* series is built around full page/full score examples on an oversized 8.5 x 11 page. So as the student works his way through the major orchestral instruments, he has a minimum of four score excerpts to reduce per instrument, where the four excerpts cover the low, medium, high and very high range of the instrument. In the back of *Professional Orchestration Volume 1*, there's also a list of the most common combinations used in the orchestra. So with highlighter in hand, the student can mark the book to see which of the *8 Keys to Learning Professional Orchestration* are used in a specific excerpt. With this approach, the student is now learning both instrumentation *and* orchestration.

The Second Thing That Must Be Taught

Two words: *critical listening*. This is the next most important success skill. In talking with orchestration teachers, looking at my experience and that of my colleagues in Los Angeles, many students matriculate to music school knowing the literature of the music they like, but most often, not much orchestral music. So when I got to L.A., I knew most of the Woody Herman book backwards and forwards. Same with Stan Kenton. But when it came to orchestral, which is what I needed to know, I was abysmally behind the power curve. And so were most of my colleagues. So there began this mad dash to listen and learn.

And listening takes time.

So when I got to Los Angeles, while working for my big break, I drove around doing sales calls for the local PBS station magazine, and turned my Ford Escort with its cassette player into a learning center. Stuck in traffic, you can do a lot of quality listening! And to fully grasp a piece, you have to listen to it over and over and over again until you've internalized the score.

This is why I included a one-year renewable subscription to the Naxos Music Library with the *Professional Orchestration* series (one subscription covers all the volumes) instead of CDs with just the excerpts from the book. With the Naxos Music Library, the student has access 24/7 to over 165,000 streaming audio tracks. So, not only can the student zoom in on the excerpt in the book, there's a playlist setup for students on the Naxos site that includes the full composition the excerpt came from. As a result, the student's learning is portable.¹ With a PDF copy of any *Professional Orchestration* volume, a WiFi connection and headphones for his laptop, a student can have a rather luxurious learning time in Starbucks, Barnes and Noble, and other locations.

Another reason I selected the Naxos Music Library over the conventional CD recordings of excerpts, was the danger I discovered of learning by snippets

¹ If a student wants a legal MP3, we have an affiliate relationship with eMusic where for \$19.95 a month a student can download 75 MP3s. That works out to about \$0.22 per track. This means that for about \$10, a student can legally download all the Beethoven symphonies and have spare change for more works!

vs. in context of the whole piece. I "discovered" this by comparing my experience from using the recordings in Hank's book (*Sound and Scores*) and Dick Grove's *Arranging Concepts* (a jazz arranging method) to having marked the scores in Bizet's *Carmen Suites* with its numerous orchestral devices and focusing my listening on the whole work. In my early stages of development, I thought by snippets. In my middle stage of development, I learned to think in terms of the whole work.

My confidence in this approach was really boosted one day at the old Warner Brothers scoring stage in Burbank, California during one of Hank's full orchestral sessions. During several cues, I just bent forward, head down, eyes closed, not looking at the score, listening to see how many of the devices I could identify. When I checked the score at the conclusion of each cue, my focused listening enabled me to identify 90% of what was happening in the score.

This experience affirmed for me that orchestration is an ear training experience. When you can hear it, you can write for it. And when you can write for it, a lot of fear is eliminated, because you're not sitting there shaking in your shoes wondering if what you put on the stands is really going to sound.

There's yet another reason for this approach and that's the whole use of electronic sample libraries used in scoring today. You have to know what instruments sound like, and, what they don't sound like. If a student hasn't begun learning that, sample libraries can make the most competent composer look incompetent.²

That's because not all of those creating libraries are really knowledgeable about orchestration and composition. As a result, for example, one company's sampled violins sound realistic in the low register while another library recorded in the same register reminds you of a sax!

Thus, knowing what instruments sound like and don't sound like enables the student to more adequately evaluate a sampled library to know what it can and can't do, and whether or not it should be bought.

² Other words that might be used by those listening include idiot, jerk, moron, amateur, dummy, putz, stupido, etc. For career success, you typically want to avoid the use of those words in connection with your name.

This is where our teaching approach in Professional Orchestration with the Naxos Music Library goes a long way to solving that problem. Here, the student learns not only what each instrument sounds like in the low, medium, high, and very high ranges, but also hundreds of combinations of instruments.

Armed with these aural insights, purchasing decisions, which affect the student's long term career, are much easier to make.

The Third Thing That Must Be Taught

This almost sounds like a no-brainer, but from all the syllabi I've read, what's not being taught is how to write for each instrument. If you accept my proposal that all the primary books are really about instrumentation, then you'll appreciate why our *Professional Mentor*TM workbook/syllabus covers song forms, basics of setting up a score, and then has weekly assignments where the student is required to write, and hopefully record depending on your school's resources, a 2-minute piece of music per week for solo instrument either with or without accompaniment. This requirement has a specific benefit for the student: upon graduation, the student has at least 10 publishable compositions ready for performance. If the student can get them recorded, the reward is a demo CD. If the student only has the orchestral player that comes with *Finale* or *Sibelius*, then the student has something to demonstrate the caliber of their work, which is far better than having nothing.

The two minute length is an intentional choice because the standard of professional writing in Hollywood is two-minutes of fully scored orchestral music per day.

With an average of 24 class hours, a student cannot write for every single orchestral instrument! But the student can write for flute, oboe, clarinet, bassoon, French horn, trumpet, trombone, tuba, harp, violin, viola, cello and bass.

To aid the student, we've set up a complete library of solo works for each of the above listed instruments at the Naxos Music Library. This way, the student has ready resources to support his work.

The next step is to emulate in class what Ravel had with *Les Apache* in Paris. Bring in a musician to sight read the music to critique the playability, and

then teach the group how to support and constructively critique each other's work. From such an approach, the student should learn this lesson, that one class can't teach it all and that there's a pro-active need on the student's part to consult with players to insure that what's been written is indeed playable.

When parts are put on the stands, the student must have all articulations put in. If a student put a piece on a stand and it had no articulation and no tempo indications I would give it an immediate F. That sounds amazingly harsh, but time is money, and that lesson needs to be learned early. If the parts aren't properly marked, then precious rehearsal time is wasted. Better to learn that in class than in the concert hall or the recording studio.

Within this, students can also score a short piece for woodwind ensemble, brass ensemble, string ensemble and then full orchestra. Again, a student doesn't need to write the equivalent of the first movement of Brahms's *Symphony #4*. But in all practicality, I think the final piece should be a short original work written for whatever instruments the school has available. If that's ten players, so be it. But the experience of writing a realistic piece of music that's actually performed (and conducted by the student) is much better than writing a full orchestral work that will be never be performed.

These three steps are the core instructional basis of *Professional Orchestration Volume 1*.

Needed: The Right Resources

Again, looking back over the past 30 years, I feel strongly about a few additional works being required by the student so that post graduation, the student has a basic working reference library to turn to. The first book is conductor Norman Del Mar's *Anatomy of the Orchestra* which gives the kind of live performance insights that just can't be covered in a single semester orchestration class. Second is Gardner Read's *Notation*, which is indispensable for both "hand" copying and computer work. Third, at least within the music library there should be a reference copy of Clinton Roemer's *The Art of Music Copying* that is badly needed for pop and jazz, especially for knowing the "correct" way to notate chords and chord symbols.

And not to sound crabby, but notation software programs don't always get it right. So the student needs back-up references to support their work.

A fourth book, available from Dover, is Forsythe's *Orchestration*. Also an instrumentation book, it has background on a number of instruments, some of which might not be used much today, but in electronic scoring are being sampled (for example, the basset horn!).

If you're happy with your present textbook selections, I strongly encourage you to examine *Professional Orchestration Volume 2A, Orchestrating the Melody Within the String Section*. Selecting this work also includes the Naxos Music Library.

Needed: Selected Scores

One of the great weaknesses of young writers entering professional life is that they seriously lack a study score library. We could debate for days what are the "right" scores to require, but I have a few practical suggestions that I think worthwhile.

Mozart Symphony #39 (or above) – From a practical scoring perspective, to study a Mozart score, even just one, is to learn how to make a small string ensemble sound big. Pay attention to Mozart's use of unison, octaves, thirds and sixths. Dover Publications.

Raider's Of the Lost Ark Theme by John Williams – Here's the writing problem this work helps solve: how to score for large orchestra with a "concert" (vs. pop) sound a song that's largely AABA in form. It's also a good study to compare concert brass vs. jazz brass writing. My second choice would be the *Phantom Menace* score (\$27 more) that covers the same ground and includes vocals. My third choice is Mr. Williams' *Harry Potter and The Sorcerer's Stone Expanded Edition: Children's Suite For Orchestra* that features bonus brass and woodwind choir arrangements (\$60).³

Fantasia on a Theme by Thomas Tallis and Other Works for Orchestra in Full Score by Ralph Vaughan Williams – This compilation includes string orchestra writing and *Fantasia on Christmas Carols* that also gets into vocal writing. Dover Publications.

³ For details on the John Williams scores please see his section on our www.truespec.com web site.

How Ravel Orchestrated: Mother Goose Suite - Tasteless as it may be, I recommend one of my works here. What I like about this work for student study is that it has good themes, jazz harmony that's relatively easy to analyze, and a practical application of counterpoint which helps the student learn how to apply in full work that which the student has learned in other classes. It's also a good work to study for learning dramatic composition ⁴

You Can't Do It All In One Semester

What this short list of scores emphasizes is what's needed to be learned compared to how much time you have to teach it. And this score list can easily be expanded to include Copland (*Appalachian Spring, The Red Pony Suite*), Mahler (*Kindertotenlieder* and *Symphony #1*), DeFalla (*Three Cornered Hat Ballet, Nights in the Garden of Spain*), Bizet (*Carmen Suites, L'Arlesienne Suites*), and to paraphrase Sonny & Cher, "The list goes on!"

In 24 - 30 class hours, you're limited in what concepts can be taught that end up being skills on completion. That's why, in my view, whatever scores you require (if you don't already), these scores need to be models of instruction covering different styles and scoring issues that the student can turn to for insight post-graduation.

If it wasn't clear before, I hope it's clear now why I said that the most important thing a student must be taught is how to teach himself. If the student can do competent score reduction, is taught the *8 Keys to Learning Professional Orchestration*, and has vast audio resources for listening, then in my view, that student has been launched with the tools needed to survive on the streets.

What I Would Not Teach In One Semester

I would not begin to attempt covering orchestral transcriptions. A number of years ago, Alexander Publishing took over the publishing of Joseph Wagner's *Orchestration: A Practical Handbook* that is a *tour de force* in learning how to transcribe from piano to each section of the orchestra then to full orchestra.⁵ I realize that one book covers some of

⁴ See www.professionalorchestration.com for details.

⁵ Wagner's *Orchestration: A Practical Handbook* is interesting in that it's a drastic revision and formalization of concepts of an earlier work by Arthur Heacox from Oberlin Conservatory with whom Joseph Wagner studied. Wide in scope, the original work tried to be a competitor at the time to Piston's *Orchestration*, but

these concepts, and while it's great that it's there for completeness (and competition), it's too much.

I say this because in my studies with Dr. Albert Harris, he and I went through the workbook and completely did the string material. It takes one semester to just do one section of the book. At the end of the time, your skill set greatly improves, especially if you have enough electronic scoring tools to record everything you write in order to hear and compare your answers.

This is advanced stuff, and given that the system from the various associations of schools and colleges only leaves open two semesters for orchestration, I would move transcription work to either bonus online instruction or as part of a master's program.

What I Would Add For a Second Semester

Our long-range publishing goal is to provide sufficient instruction for your school to offer a minor in orchestration. As such, we have a depth of instructional materials to enable you to fulfill this goal both on campus and online.

If you could add a second semester class, I would recommend either using our *Writing For Strings*TM courseware or using *Professional Orchestration Volumes 2A and 2B, Orchestrating the Melody Within Each Orchestral Section*.⁶

Once the student has passed through the basic instrumentation issues, instruction can now begin on learning those needed orchestral devices.

Which one you should choose really depends on the students and their post-graduation goals. The training goal of *Writing For Strings* is teach students how to write for live players and how to make electronic strings sound live. If the students and/or the school have the proper software and electronic libraries, then go with *Writing For*

it didn't succeed because the book lacked a sound package to know what the examples sounded like, recordings of the piano examples in the workbook (since most students can't play keyboards at a concert level), and overall, a sense of knowing whether your solutions are "right" or not. These issues have been resolved in our revised series, retitled *Transcribing For Orchestra* that has training for strings, woodwinds, and full orchestra. A new brass class will be prepared later as I felt what was originally written was inadequate.

⁶ For a summary table of contents please see

<http://www.truespec.com/professional-orchestration-volume-p-409.html>

Strings. If all that's available to check a score are the players in Sibelius, Finale or even Notion, I would go with *Professional Orchestration Volumes 2A and 2B*. With the combined Volume 2, the semester can be divided in thirds. Here, because work is more forthcoming for those really capable of writing for strings, I'd put half the class time on strings, and split the second half between woodwinds and brass. Since Volume 2 is completely supported by the Naxos Music Library, all of the pieces cited are online, and a handful of scores from Dover Publications can be selected for more in-depth study.

What About Electronic Scoring?

You can get students scoring electronically depending on the software available, but within this is the much-needed skill of MIDI editing. With only 24 hours or so of class time, you can't cover it all, and within a 2-hour class, you can't cover instrumentation and MIDI editing, too.

The most important thing for a student is to hear even the most basic replication of how their score sounds. The players within Finale, Notion and Sibelius do an adequate job. The advantage of the players within Finale and Sibelius over Notion (even though Notion is faster to learn and use) is that the players have some reverb thus giving the work a more professional sound, with a lot more stage presence. Additionally, students who invest their time learning Finale or Sibelius are working with industry standard programs. So, the more proficient they become in either program, the greater their post graduation income earning potential.

To Stir the Pot Just a Little More...

If you agree with my idea that what we're calling orchestration is really instrumentation, then consider this proposal. Call it what it is and start teaching instrumentation in the first semester. Why should students go six semesters before learning about the instruments that surround them? If you start instrumentation in the first semester, then one semester can be devoted to studying each orchestral family so that by the end of the sophomore year, the student knows the strings, the brass, the woods, and the percussion. Add electronic scoring to this, and just imagine what you could be teaching in the beginning of the junior year. Just a thought.