By EDDIE PELLS

The Associated Press

Professor Michael Magazine is upending the logical world of math with a good dose of March Madness. Magazine teaches a new class called Bracketology at University of Cincinnati, the home of the 10th-seeded Bearcats, where 33 business students are spending the semester trying to make sense out of what can feel nonsensical at times — the art of filling out an NCAA tournament bracket. “The life lesson is that we make a lot of decisions that are the right decisions,” Magazine says, “but the outcomes don’t always come out the way we planned.”

And that’s why picking the NCAA tournament is so much fun. Magazine says that, yes, he’s among the millions of Americans who take part in the country’s largest office pool — where all you need is a pen, a copy of the bracket and $10 or $20 to get in on the action.

Real basketball knowledge? That’s optional. Some people pick their favorite mascot, others go based on color, still others just throw darts at a board.

“I always tell people to ignore where they went to school,” Magazine says. “But it’s hard to do.”

He teaches the course with a Cincinnati alum, Paul Bessire, who owns predictionmachine.com, a program that runs thousands of simulations to forecast likely winners of games. Armed with that, along with some mathematical models, Magazine and Bessire hold three sessions — handicapping, assembling brackets, filling out the brackets and seeing how everyone did. “It’s a pass-fail class,” Magazine says. Good thing because when it comes to March Madness, the numbers get a little crazy. According to the website bookofodds.com, if you fill out your bracket by picking the better-seeded team in every game, the odds of that bracket being perfect are more than 35 billion-1. Or, to put it another way, you have an 18 times better chance of being killed by a waterspout this year.

There are more than 9.2 quintillion combinations (a 9, followed by 18 zeroes) and even if you eliminate all those that have a No. 16 seed winning even a single game — which has never happened — you're still talking about enough paper to build a trail from the Earth to the moon more than 1 million times. Oh, and about eliminating those No. 16 seeds: Might think twice about that. This has been the most unpredictable college basketball season anyone can remember, including one stretch where the No. 1 team in The Associated Press Top 25 changed for five straight weeks. Even in seasons that have seemed more "predictable," the NCAA tournament has become increasingly unstable over recent years. Butler, enrollment 4,500, has made the Final Four twice in the last three years. In 2011, little-known and even less-heralded VCU transformed itself from a No. 11 seed that barely got into the tournament into a Final Four team. Last year, two No. 15 teams won on the first Friday of the tournament. After the second upset, ESPN reported none of its 6.45 million bracket entries were perfect anymore. "We messed up some brackets! We messed up some brackets!" senior Kyle O'Quinn exclaimed last year after he led 15th-seeded Norfolk to an 86-84 upset over Missouri. Tom DeRosa, a former algebra teacher who now runs a website that provides teachers with everyday lessons for their own classes, says there is no mathematically surefire way to figure out which 15 or 16 might break through this year. But you can't completely ignore them, either.

"You look at the numbers and, yeah, it's a pretty good bet a 1, 2 or 3 seed is going to win the whole tournament," says DeRosa, whose March Madness lesson is being taught across America this week. "If you're making a bracket and you don't have any '1's in the Final Four or anywhere near the Final Four, you're probably not going to win your pool. But things get a lot more nuanced the more you read."

Speaking of nuance:

— Blue has been the school color of 24 of the 40 teams to make the Final Four during the last 10 years and the hue worn by the last nine national champions. — Of those 40 Final Four team mascots, 12 have been people (Spartan, Mountaineer, etc.), seven have been canines and five have been birds (mostly the mythical Jayhawk). There have been Warriors at the Final Four and a Gator or two. But the most ferocious — for those who like to pair the mascots off in cage matches — has been, by far, the Blue Devil.

— Las Vegas, which exists because of its ability to get math right, has No. 1 seed Louisville as a 9-2 favorite to win it all, followed by second-seeded Duke and Miami at 8-1. (Warning: Odds can be influenced by betting patterns, and Duke has one of the largest followings in the nation.)

Using a mix of all this information is Glen Calhoun, the head of props for the national tour of the Broadway smash “Jersey Boys.” On Monday, he was busy unloading nine trucks full of wardrobe and scenery, as the show moved from Norfolk, Va., to Houston. Not his only task of the day. “I’ve got to get our NCAA brackets set up,” he said. “I’ll be sure to squeeze that in.”

More than 50 people are in the cast and crew; Calhoun figured at least half of them would take part.

“What’s good about the March Madness pool is that anyone can get in there and do well,” he said. “You can study up, and then it all falls apart. I remember one year when Wake Forest got me. Or you can just pick your favorite teams and that works sometimes.”

Magazine insists that, yes, there is mathematical advice to follow, including some he picked up by reading Nate Silver, the blogger who picked the electoral college count in last year’s presidential election nearly to the number.

Silver suggests that Nos. 8 and 9 seeds can sometimes be worse Sweet 16 picks than those seeded 10, 11 or 12 because the winner of an 8-9 matchup is all but destined to play a No. 1 in the next round. “I tell people, if you’re going to pick upsets, do it in the 10, 11, 12, 13 range,” Magazine said. It’s OK to use your gut, Magazine says. But, he insists, it’s folly to completely ignore the numbers. “Sometimes, you predict someone’s better because in simulations, 80 percent of the time they win,” he added. “Well, that means 20 percent of the time they lose. That’s going to happen. That’s been a useful lesson for students.”

And, as any good math professor will remind you, being wrong doesn’t always mean you were, well, wrong — even if the scoreboard says you were.

“It just means it didn’t work out that time,” Magazine closed.

Graduation rates improve for NCAA tournament teams: Overall graduation rates improved

among players at schools in this year's men's NCAA basketball tournament and African-American players in particular did better, according to a study released Monday.

The annual report by the University of Central Florida's Institute for Diversity and Ethics in Sport (TIDES) shows African-American players' graduation success rate increased from 59 percent in 2012 to 65 percent this year, while white players' rates increased from 88 percent to 90 percent.

The overall graduation rates for programs in the tournament increased from 67 percent in 2012 to 70 percent.

Six out of the tournament's 68 teams have an APR score that falls below the NCAA's new 930 line, which could lead to future penalties. Those teams are Southern, James Madison, Saint Louis, New Mexico State, Oregon and Oklahoma State.

Richard Lapchick, the study's primary author, said the majority of the report contains good news.

Information was collected by the NCAA from member institutions for the study. The institute reviewed the 6-year graduation rates of each school's freshman class, or Graduation Success Rates, then calculated a four-class average or Academic Progress Rate. "In general, it's the most progress I've seen overall," Lapchick told The Associated Press. "To be specific, every facet that we consider, everyone on the team, all the graduation rates increased. The APR scores increased significantly over the past year. And the difference in rates between white and African-American players declined 3 percent, though that gap is still a major factor of concern."

There is a 25 percentage-point difference in the graduation gap between white and African-American players among tournament teams this year. Lapchick said more progress needs to be made in that area, though he noted the 65 percent graduation rate for African-American basketball players was significantly higher than the 38 percent for all male African-American college students.

Lapchick noted there were two major factors in the study's improving numbers: the NCAA's

tightening academic rules and the recent involvement of U.S. Secretary of Education Arne Duncan.

“The fact that teams can lose scholarships has been an extremely strong deterrent. Everything has improved consistently and continues to improve,” Lapchick said. “Arne Duncan got involved and that’s also been very important. He was a student-athlete and the NCAA certainly doesn’t want the federal government involved.”

The APR was developed by the NCAA in 2004 as a means to improve graduation rates and is a 4-year rolling average of academic performance that takes into account academic eligibility and retention.

The NCAA recently voted to increase its APR cutoff line for Division I programs from 925 to 930, which is roughly equivalent to a 50 percent graduation rate. The new standard is being phased into the NCAA’s average starting this year.

Ten schools were banned from this year’s postseason — including 2011 national champion Connecticut.

Lapchick said the real threat of penalties has encouraged schools to watch graduation rates closely. This year’s study showed that 79 percent of the teams (54 of 68) in this year’s tournament have scores of 950 or more.

“We are doing better each year,” Lapchick added. “The academic reforms instituted in the past have worked. We need to raise the bar and move toward 60 percent being the acceptable standard for the APR. Two thirds of this year’s teams in the men’s tournament are already there.”

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